

SCORE Search Results Details for Application 10591347 and Search Result 20110118_090620_us-10-591-347-2.rng.

| | | | | |
|---------------------------------|---|---------------------------------------|---------------------------|--|
| Score Home Page | Retrieve Application List | SCORE System Overview | SCORE FAQ | Comments / Suggestions |
|---------------------------------|---|---------------------------------------|---------------------------|--|

This page gives you Search Results detail for the Application 10591347 and Search Result 20110118_090620_us-10-591-347-2.rng.

[Go Back to previous page](#)

GenCore version 6.3
Copyright (c) 1993 - 2011 Biocceleration Ltd.

OM nucleic - nucleic search, using sw model

Run on: January 18, 2011, 09:09:15 ; Search time 488 Seconds
(without alignments)
148827.160 Million cell updates/sec

Title: US-10-591-347-2

Perfect score: 3424

Sequence: 1 aggatcagaacaatgcctcc.....taaactagttcattcaaaa 3424

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 18225500 seqs, 10608060480 residues

Total number of hits satisfying chosen parameters: 36451000

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : N_Geneseq_201023:
1: geneseqn1:
2: geneseqn2:
3: geneseqn3:
4: geneseqn4:
5: geneseqn5:
6: geneseqn6:
7: geneseqn7:
8: geneseqn8:

9: geneseqn9:*

SUMMARIES

| Result No. | Query | | | | | Description |
|---------------|--------|-------|--------|----|----------|--------------------|
| | Score | Match | Length | DB | ID | |
| 1 | 3424 | 100.0 | 3424 | 1 | AAS14365 | Aas14365 cDNA enco |
| 2 | 3424 | 100.0 | 3424 | 1 | ABL59523 | Ab159523 Human pho |
| 3 | 3424 | 100.0 | 3424 | 2 | ADE85076 | Ade85076 Farnesyl |
| 4 | 3424 | 100.0 | 3424 | 4 | ADZ00490 | Adz00490 p110-beta |
| 5 | 3424 | 100.0 | 3424 | 4 | AEH10445 | Aeh10445 PIK3CA cD |
| 6 | 3424 | 100.0 | 3424 | 4 | AED31618 | Aed31618 cDNA (SEQ |
| 7 | 3424 | 100.0 | 3424 | 4 | AEG93388 | Aeg93388 Human tum |
| 8 | 3412 | 99.6 | 3412 | 1 | AAQ51156 | Aaq51156 Human p11 |
| 9 | 3412 | 99.6 | 3412 | 4 | AED31617 | Aed31617 cDNA (SEQ |
| 10 | 3412 | 99.6 | 3423 | 3 | ADU05935 | Adu05935 Novel bro |
| 11 | 3339.6 | 97.5 | 3426 | 6 | ARC02473 | Arc02473 DNA fragm |
| 12 | 3339.6 | 97.5 | 3724 | 4 | AEK54940 | Aek54940 Human PIK |
| 13 | 3339.6 | 97.5 | 3724 | 5 | AER29796 | Aer29796 Breast ca |
| 14 | 3339.6 | 97.5 | 3724 | 7 | ARV60468 | Arv60468 Human PIK |
| 15 | 3339.6 | 97.5 | 3724 | 7 | ARW65283 | Arw65283 Human PIK |
| 16 | 3339.6 | 97.5 | 3724 | 7 | ATM52123 | Atm52123 Human PIK |
| 17 | 3339.6 | 97.5 | 3724 | 7 | ATS16021 | Ats16021 Human pho |
| 18 | 3339.6 | 97.5 | 3724 | 8 | AWY98731 | Awy98731 Human PIK |
| 19 | 3339.6 | 97.5 | 3724 | 8 | AWY98891 | Awy98891 Human PIK |
| 20 | 3339.6 | 97.5 | 3724 | 8 | AWY98894 | Awy98894 Human PIK |
| 21 | 3339.6 | 97.5 | 3724 | 9 | AXU25358 | Axu25358 Human pho |
| 22 | 3339.6 | 97.5 | 3724 | 9 | AYE41305 | Aye41305 Human PIK |
| 23 | 3281 | 95.8 | 4326 | 8 | AWY98838 | Awy98838 Human PIK |
| 24 | 3207 | 93.7 | 3207 | 2 | ADH68168 | Adh68168 DNA encod |
| 25 | 3207 | 93.7 | 3207 | 4 | AEF64785 | Aef64785 Human pho |
| 26 | 3146.6 | 91.9 | 7923 | 8 | AWO77361 | Awo77361 Expressio |
| 27 | 3146.2 | 91.9 | 3207 | 7 | ARL60529 | Arl60529 Human pho |
| 28 | 3144.6 | 91.8 | 3207 | 4 | AEK13519 | Aek13519 Phosphati |
| 29 | 3143 | 91.8 | 3207 | 4 | AEK13514 | Aek13514 Phosphati |
| 30 | 3143 | 91.8 | 3207 | 4 | AEK13515 | Aek13515 Phosphati |
| 31 | 3138.6 | 91.7 | 3498 | 1 | AAQ57012 | Aaq57012 PtdIns 3- |
| 32 | 3120.4 | 91.1 | 3210 | 4 | AEK13511 | Aek13511 Phosphati |
| 33 | 3008.6 | 87.9 | 3207 | 1 | AAQ51155 | Aaq51155 p110 cDNA |
| 34 | 2642.2 | 77.2 | 3207 | 8 | AWY98836 | Awy98836 Human PIK |
| 35 | 2642.2 | 77.2 | 3207 | 8 | AWY98892 | Awy98892 Human PIK |
| 36 | 1687.6 | 49.3 | 8421 | 2 | ACN43202 | Acn43202 Human dia |
| 37 | 1515.8 | 44.3 | 2397 | 1 | AFS82080 | Afs82080 Human tra |
| 38 | 1183.4 | 34.6 | 1792 | 3 | ADR39810 | Adr39810 Human kin |
| 39 | 699 | 20.4 | 2872 | 8 | AWY98893 | Awy98893 Human PIK |
| 40 | 564 | 16.5 | 741 | 1 | AAA02190 | Aaa02190 Human col |
| 41 | 564 | 16.5 | 741 | 4 | AGD33161 | Agd33161 Human pol |
| 42 | 530 | 15.5 | 716 | 4 | AEK18520 | Aek18520 Human PIK |
| 43 | 460.8 | 13.5 | 3213 | 1 | AAC65690 | Aac65690 Human PI3 |

| | | | | | |
|----|-------|------|------|---|----------|
| 44 | 460.8 | 13.5 | 3213 | 1 | AAS14366 |
| 45 | 460.8 | 13.5 | 3213 | 1 | ABV78026 |

| | | |
|----------|-----------|------|
| Aas14366 | cDNA | enco |
| Abv78026 | Hypoxia-r | |

ALIGNMENTS

RESULT 1

AAS14365

ID AAS14365 standard; cDNA; 3424 BP.

XX

AC AAS14365;

XX

DT 11-JUN-2007 (revised)

DT 12-MAR-2002 (first entry)

XX

DE cDNA encoding human p110alpha isoform of PI3-kinase.

XX

KW Human; phosphatidylinositol 3-kinase; PI3K; p110alpha isoform; LASP-1;

KW cancer; inflammatory disease; ophthalmic disorder; SH3 domain;

KW autoimmune disease; inflammatory bowel disease; bacterial pneumonia;

KW Type I diabetes mellitus; cytostatic; immunosuppressive; ss.

XX

OS Homo sapiens.

XX

FH Key Location/Qualifiers

FT CDS 13..3219

FT /*tag= a

FT /product= "p110alpha isoform of PI3-kinase"

XX

PN WO200185986-A2.

XX

PD 15-NOV-2001.

XX

PF 10-MAY-2001; 2001WO-US015065.

XX

PR 10-MAY-2000; 2000US-0203346P.

XX

PA (ICOS-) ICOS CORP.

XX

PI Sadhu C;

XX

DR WPI; 2002-075252/10.

DR P-PSDB; AAU09687.

DR PC:NCBI; gi472990.

DR PC_ENCPRO:NCBI; gi472991.

XX

PT Identifying a modulator of p110delta polypeptide binding to SH3 domain-containing polypeptides e.g. LASP-1, comprising allowing the binding

PT partners to interact in the presence and absence of a test compound.

XX
PS Example 1; Page 55-60; 85pp; English.

CC The present invention relates to identifying a modulator of the
CC phosphatidylinositol 3-kinase (PI3K; p110delta) enzyme that binds to the
CC catalytic subunit via a SH3 domain-containing polypeptide such as LASP-1.
CC Also described are methods of assaying the specific binding affinity of
CC the PI3-kinase binding partner. Such modulators are useful for the
CC treatment of diseases characterised by the undesirable or excessive
CC activity of PI3Kdelta. For example the modulators can be used for
CC inhibiting the growth or proliferation of cancer cells (e.g. malignant
CC neoplasms of lymphoid and reticuloendothelial tissues, Hodgkin's
CC lymphoma, leukaemias), inflammatory diseases (e.g. rheumatoid arthritis),
CC ophthalmic disorders (e.g. allergic conjunctivitis), autoimmune diseases
CC (e.g. systematic lupus erythematosus), inflammatory bowel diseases (e.g.
CC chronic inflammatory bowel disease), inflammatory dermatoses (e.g.
CC contact dermatitis; central or peripheral nervous system inflammatory
CC disorders (e.g. meningitis), bacterial pneumonia, and Type I diabetes
CC mellitus. The present sequence encodes for human p110alpha isoform of
CC PI3k

CC
CC Revised record issued on 11-JUN-2007 : Enhanced with precomputed
CC information from BOND.

XX
SQ Sequence 3424 BP; 1134 A; 618 C; 709 G; 963 T; 0 U; 0 Other;

Query Match 100.0%; Score 3424; DB 1; Length 3424;
Best Local Similarity 100.0%;
Matches 3424; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AGGATCAGAACATGCCTCCAAGACCATCATCAGGTGAACGTGGGCATCCACTTGATG 60
||| ||||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

Db 1 AGGATCAGAACATGCCTCCAAGACCATCATCAGGTGAACGTGGGCATCCACTTGATG 60

Qy 61 CCCCAAGAACATCCTAGTGGATGTTACTACCAAATGGAATGATAGTGTACTTAGAATGC 120
||| ||||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

Db 61 CCCCAAGAACATCCTAGTGGATGTTACTACCAAATGGAATGATAGTGTACTTAGAATGC 120

Qy 121 CTCCGTGAGGCTACATTAGTAACATAAGCATGAACATTAAAGCAAGAAATAC 180
||| ||||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

Db 121 CTCCGTGAGGCTACATTAGTAACATAAGCATGAACATTAAAGCAAGAAATAC 180

Qy 181 CCTCTCCATCAACTTCTCAAGATGAATCTTCTACATTTCGTAAGTGTACCCAAGAA 240
||| ||||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

Db 181 CCTCTCCATCAACTTCTCAAGATGAATCTTCTACATTTCGTAAGTGTACCCAAGAA 240

Qy 241 GCAGAAAGGGAGAATTTTGATGAAACAAGACGACTTGTGATCTCGGTTTTCAA 300
||| ||||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

| | | | |
|----|-----|---|------|
| Db | 241 | GCAGAAAGGGAGAATTTTGATGAAACAAGACGACTTGTGATCTCGGCTTTCAA | 300 |
| Qy | 301 | CCATTTTAAAAGTAATTGAACCACTAGGCAACCCTGAAGAAAAGATCCTCAATCGAGAA | 360 |
| Db | 301 | | |
| Db | 301 | CCATTTTAAAAGTAATTGAACCACTAGGCAACCCTGAAGAAAAGATCCTCAATCGAGAA | 360 |
| Qy | 361 | ATTGGTTTGCTATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTA | 420 |
| Db | 361 | | |
| Db | 361 | ATTGGTTTGCTATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTA | 420 |
| Qy | 421 | CAGGACTCCGAAGAAATATTCTTAATGTTGTAAGAACGCTGTGGATCTTAGGGATCTT | 480 |
| Db | 421 | | |
| Db | 421 | CAGGACTCCGAAGAAATATTCTTAATGTTGTAAGAACGCTGTGGATCTTAGGGATCTT | 480 |
| Qy | 481 | AATTCACCTCATAGTAGAGCAATGTATGCTATCCGCCACATGTAGAATCTCACAGAG | 540 |
| Db | 481 | | |
| Db | 481 | AATTCACCTCATAGTAGAGCAATGTATGCTATCCGCCACATGTAGAATCTCACAGAG | 540 |
| Qy | 541 | CTGCCAAAGCACATATATAAAATTGGATAGAGGCAAAATAATGGTGATTGGGTA | 600 |
| Db | 541 | | |
| Db | 541 | CTGCCAAAGCACATATATAAAATTGGATAGAGGCAAAATAATGGTGATTGGGTA | 600 |
| Qy | 601 | ATAGTTCTCCAATAATGACAAGCAGAAGTATACTCTGAAAATCAACCAGACTGTG | 660 |
| Db | 601 | | |
| Db | 601 | ATAGTTCTCCAATAATGACAAGCAGAAGTATACTCTGAAAATCAACCAGACTGTG | 660 |
| Qy | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTGCTATCATCT | 720 |
| Db | 661 | | |
| Db | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTGCTATCATCT | 720 |
| Qy | 721 | GAACAATTAAACTCTGTGTTAGAATATCAGGGCAAGTACATTTAAAAGTGTGGA | 780 |
| Db | 721 | | |
| Db | 721 | GAACAATTAAACTCTGTGTTAGAATATCAGGGCAAGTACATTTAAAAGTGTGGA | 780 |
| Qy | 781 | TGTGATGAAACTTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATATAAGCTGT | 840 |
| Db | 781 | | |
| Db | 781 | TGTGATGAAACTTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATATAAGCTGT | 840 |
| Qy | 841 | ATAATGCTGGGAGGATGCCAATTGAAGATGATGGCTAAAGAACGCTTATTCTCAA | 900 |
| Db | 841 | | |
| Db | 841 | ATAATGCTGGGAGGATGCCAATTGAAGATGATGGCTAAAGAACGCTTATTCTCAA | 900 |
| Qy | 901 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 960 |
| Db | 901 | | |
| Db | 901 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 960 |
| Qy | 961 | TATATGAATGGAGAACATCTACAAAATCCCTTGGTTATAATAGAGCACTCAGAATA | 1020 |
| Db | 961 | | |
| Db | 961 | TATATGAATGGAGAACATCTACAAAATCCCTTGGTTATAATAGAGCACTCAGAATA | 1020 |

| | | | |
|----|------|---|------|
| Qy | 1021 | AAAATTCTTGTGCAACCTACGTGAATCTAAATTCGAGACATTGACAAGATTATGTT | 1080 |
| | | | |
| Db | 1021 | AAAATTCTTGTGCAACCTACGTGAATCTAAATTCGAGACATTGACAAGATTATGTT | 1080 |
| | | | |
| Qy | 1081 | CGAACAGGTATCTACCATGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1140 |
| | | | |
| Db | 1081 | CGAACAGGTATCTACCATGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1140 |
| | | | |
| Qy | 1141 | CCTTGTTCATCCAGGTGGAATGGAATGGCTGAATTATGATATACATTCTGTACCTT | 1200 |
| | | | |
| Db | 1141 | CCTTGTTCATCCAGGTGGAATGGAATGGCTGAATTATGATATACATTCTGTACCTT | 1200 |
| | | | |
| Qy | 1201 | CCTCGTGCTGCTCGACTTGCCTTCCATTGCTCTGTTAAAGGCCGAAAGGGTGTAAA | 1260 |
| | | | |
| Db | 1201 | CCTCGTGCTGCTCGACTTGCCTTCCATTGCTCTGTTAAAGGCCGAAAGGGTGTAAA | 1260 |
| | | | |
| Qy | 1261 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTA | 1320 |
| | | | |
| Db | 1261 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTA | 1320 |
| | | | |
| Qy | 1321 | GTATCTGGAAAAATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| | | | |
| Db | 1321 | GTATCTGGAAAAATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| | | | |
| Qy | 1381 | AACCCTATTGGTGTACTGGATCAAATCCAATAAAGAAAACCTCATGCTTAGAGTTGGAG | 1440 |
| | | | |
| Db | 1381 | AACCCTATTGGTGTACTGGATCAAATCCAATAAAGAAAACCTCATGCTTAGAGTTGGAG | 1440 |
| | | | |
| Qy | 1441 | TTTGACTGGTTCAGCAGTGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |
| | | | |
| Db | 1441 | TTTGACTGGTTCAGCAGTGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |
| | | | |
| Qy | 1501 | AATTGGTCTGTATCCCGAGAACAGCAGGATTAGCTATTCCCACGCAGGACTGAGTAACAGA | 1560 |
| | | | |
| Db | 1501 | AATTGGTCTGTATCCCGAGAACAGCAGGATTAGCTATTCCCACGCAGGACTGAGTAACAGA | 1560 |
| | | | |
| Qy | 1561 | CTAGCTAGAGACAATGAATTAGGGAAAATGACAAAGAACAGCTCAAAGCAATTCTACA | 1620 |
| | | | |
| Db | 1561 | CTAGCTAGAGACAATGAATTAGGGAAAATGACAAAGAACAGCTCAAAGCAATTCTACA | 1620 |
| | | | |
| Qy | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAAGATTCTATGGAGTCACAGACAC | 1680 |
| | | | |
| Db | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAAGATTCTATGGAGTCACAGACAC | 1680 |
| | | | |
| Qy | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGTCTGTTAAATGGAATTCT | 1740 |
| | | | |
| Db | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGTCTGTTAAATGGAATTCT | 1740 |
| | | | |

| | | | |
|----|------|--|------|
| Qy | 1741 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAGATTGGCCTCCAATCAAACCTGAA | 1800 |
| Db | 1741 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAGATTGGCCTCCAATCAAACCTGAA | 1800 |
| Qy | 1801 | CAGGCTATGGAACTTCTGGACTGTAATTACCCAGATCCTATGGTCGAGGTTTGCTGTT | 1860 |
| Db | 1801 | CAGGCTATGGAACTTCTGGACTGTAATTACCCAGATCCTATGGTCGAGGTTTGCTGTT | 1860 |
| Qy | 1861 | CGGTGCTTGGAAAAATATTAACAGATGACAAACTTCTCAGTATTAATTCTAGCTAGTA | 1920 |
| Db | 1861 | CGGTGCTTGGAAAAATATTAACAGATGACAAACTTCTCAGTATTAATTCTAGCTAGTA | 1920 |
| Qy | 1921 | CAGGTCTAAAATATGAACAATATTGGATAACTGCTGTGAGATTTACTGAAGAAA | 1980 |
| Db | 1921 | CAGGTCTAAAATATGAACAATATTGGATAACTGCTGTGAGATTTACTGAAGAAA | 1980 |
| Qy | 1981 | GCATTGACTAATCAAAGGATTGGGACTTTTCTTTGGCATTAAAATCTGAGATGCAC | 2040 |
| Db | 1981 | GCATTGACTAATCAAAGGATTGGGACTTTTCTTTGGCATTAAAATCTGAGATGCAC | 2040 |
| Qy | 2041 | AATAAACAGTTAGCCAGAGGTTGGCCTGCTTTGGAGTCCTATTGTCGTGCATGTGGG | 2100 |
| Db | 2041 | AATAAACAGTTAGCCAGAGGTTGGCCTGCTTTGGAGTCCTATTGTCGTGCATGTGGG | 2100 |
| Qy | 2101 | ATGTATTGAAAGCACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTCATTAACCTAACT | 2160 |
| Db | 2101 | ATGTATTGAAAGCACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTCATTAACCTAACT | 2160 |
| Qy | 2161 | GACATTCTAACACAGGAGAGGAAGGGATGAAACACAAAAGGTACAGATGAAGTTAGTT | 2220 |
| Db | 2161 | GACATTCTAACACAGGAGAGGAAGGGATGAAACACAAAAGGTACAGATGAAGTTAGTT | 2220 |
| Qy | 2221 | GAGCAAATGAGGCAGCCAGATTCTATGGATGCCCTACAGGGCTTGTCTCCTCTAAAC | 2280 |
| Db | 2221 | GAGCAAATGAGGCAGCCAGATTCTATGGATGCCCTACAGGGCTTGTCTCCTCTAAAC | 2280 |
| Qy | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTAAAGAGTGTGAAATTATGTCTCTGCAAAA | 2340 |
| Db | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTAAAGAGTGTGAAATTATGTCTCTGCAAAA | 2340 |
| Qy | 2341 | AGGCCACTGTGGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTCAGAAC | 2400 |
| Db | 2341 | AGGCCACTGTGGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTCAGAAC | 2400 |
| Qy | 2401 | AATGAGATCATTTAAAATGGGATGATTACGGCAAGATATGCTAACACTTCAAATT | 2460 |
| Db | 2401 | AATGAGATCATTTAAAATGGGATGATTACGGCAAGATATGCTAACACTTCAAATT | 2460 |
| Qy | 2461 | ATTCGTATTATGGAAAATCTGGAAAATCAAGGTCTGATCTCGAATGTTACCTTAT | 2520 |

| | | | |
|----|------|--|------|
| Db | 2461 | ATTCGTATTATGGAAAATATCTGGAAATCAAGGCTTGATCTCGAATGTTACCTTA | 2520 |
| Qy | 2521 | GGTTGTCTGCAATCGGTGACTGTGTGGGACTTATTGAGGTGGTGCAGAAATTCTCACACT | 2580 |
| Db | 2521 | GGTTGTCTGCAATCGGTGACTGTGTGGGACTTATTGAGGTGGTGCAGAAATTCTCACACT | 2580 |
| Qy | 2581 | ATTATGCAAATTCACTGCAAAGGCCGTTGAAAGGTGCACTGCAGTTCAACAGCCACACA | 2640 |
| Db | 2581 | ATTATGCAAATTCACTGCAAAGGCCGTTGAAAGGTGCACTGCAGTTCAACAGCCACACA | 2640 |
| Qy | 2641 | CTACATCAGTGGCTCAAAGACAAGAACAAAGGAGAAATATGATGCAGCCATTGACCTG | 2700 |
| Db | 2641 | CTACATCAGTGGCTCAAAGACAAGAACAAAGGAGAAATATGATGCAGCCATTGACCTG | 2700 |
| Qy | 2701 | TTTACACGTTCATGTGCTGGACTGTGAGCTACCTTCATTTGGGAATTGGAGATCGT | 2760 |
| Db | 2701 | TTTACACGTTCATGTGCTGGACTGTGAGCTACCTTCATTTGGGAATTGGAGATCGT | 2760 |
| Qy | 2761 | CACAATAGTAACATCATGGTGAAAGACGATGGACAACGTGTTCATATAGATTGGACAC | 2820 |
| Db | 2761 | CACAATAGTAACATCATGGTGAAAGACGATGGACAACGTGTTCATATAGATTGGACAC | 2820 |
| Qy | 2821 | TTTTGGATCACAAGAAGAAAAAATTGGTTATAACGAGAACGTGTCGCATTGTTTG | 2880 |
| Db | 2821 | TTTTGGATCACAAGAAGAAAAAATTGGTTATAACGAGAACGTGTCGCATTGTTTG | 2880 |
| Qy | 2881 | ACACAGGATTCTTAATAGTGATTAGTAAAGGAGCCAAAGAATGCACAAAGACAAGAGAA | 2940 |
| Db | 2881 | ACACAGGATTCTTAATAGTGATTAGTAAAGGAGCCAAAGAATGCACAAAGACAAGAGAA | 2940 |
| Qy | 2941 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACACGATGCCAAT | 3000 |
| Db | 2941 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACACGATGCCAAT | 3000 |
| Qy | 3001 | CTCTTCATAAAATCTTCTCAATGATGCTTGGCTCTGGAAATGCCAGAACTACAATCTTT | 3060 |
| Db | 3001 | CTCTTCATAAAATCTTCTCAATGATGCTTGGCTCTGGAAATGCCAGAACTACAATCTTT | 3060 |
| Qy | 3061 | GATGACATTGCATACATTGAAAGACCCTAGCCTAGATAAAACTGAGCAAGAGGCTTTG | 3120 |
| Db | 3061 | GATGACATTGCATACATTGAAAGACCCTAGCCTAGATAAAACTGAGCAAGAGGCTTTG | 3120 |
| Qy | 3121 | GAGTATTTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT | 3180 |
| Db | 3121 | GAGTATTTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT | 3180 |
| Qy | 3181 | TGGATCTTCCACACAATTAAACAGCATGCATTGAACTGAAAGATAACTGAGAAAATGAAA | 3240 |

| | | |
|----|---|------|
| Db | 3181 TGGATCTTCCACACAATTAAACAGCATGCATTGAACTGAAAGATAACTGAGAAAATGAAA | 3240 |
| Qy | 3241 GCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGCAAAGACCGATTGCA | 3300 |
| Db | 3241 | |
| Db | 3241 GCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGCAAAGACCGATTGCA | 3300 |
| Qy | 3301 TAGGAATTGCACAATCCATGAACAGCATTAGATTTACAGCAAGAACAGAAATAAAACT | 3360 |
| Db | 3301 | |
| Db | 3301 TAGGAATTGCACAATCCATGAACAGCATTAGATTTACAGCAAGAACAGAAATAAAACT | 3360 |
| Qy | 3361 ATATAATTAAATAATGTAAACGCACACAGGGTTTGATAGCACTTAAACTAGTTCATTC | 3420 |
| Db | 3361 | |
| Db | 3361 ATATAATTAAATAATGTAAACGCACACAGGGTTTGATAGCACTTAAACTAGTTCATTC | 3420 |
| Qy | 3421 AAAA 3424 | |
| Db | 3421 | |
| Db | 3421 AAAA 3424 | |

RESULT 2

ABL59523

ID ABL59523 standard; cDNA; 3424 BP.

XX

AC ABL59523;

XX

DT 11-JUN-2007 (revised)

DT 16-JUL-2002 (first entry)

XX

DE Human phosphatidylinositol-3-kinase catalytic alpha cDNA SEQ ID NO:23.

XX

KW Human; phosphatidylinositol-3-kinase catalytic alpha; enzyme; tumour; lipid associated gene; lipid metabolism; lipid synthesis; chromosome 3q26.3; gene; ss.

XX

OS Homo sapiens.

XX

PN WO200227028-A1.

XX

PD 04-APR-2002.

XX

PF 27-SEP-2001; 2001WO-US030366.

XX

PR 28-SEP-2000; 2000US-00676052.

XX

PA (ATAI-) ATAIRGIN TECHNOLOGIES INC.

XX

PI Skinner MK, Patton JL, Chaudhary J;

XX

DR WPI; 2002-405056/43.

DR PC:NCBI; gi472990.

DR PC_ENCPRO:NCBI; gi472991.

XX

PT Identifying tumor characteristics in a tissue sample taken from a patient, involves determining the copy number or expression level of genes associated with lipid metabolism, synthesis or action.

XX

PS Example 1; Page 82-83; 113pp; English.

XX

CC The present invention describes a method for identifying tumour characteristics, comprising measuring a copy number or expression level of at least two genes associated with lipid metabolism, synthesis, or action in cells from a patient tissue sample, and comparing the results with a copy number or expression level of the genes in a normal cell.

CC Also described is an array of nucleic acid polymers immobilised on a solid support, comprising a solid support, at least two different nucleic acid polymers which are each specific for a different gene associated with lipid metabolism, synthesis or action, where each nucleic acid polymer is located at a predetermined position on the solid support, and the array comprises nucleic acid polymers which are specific for less than 100 genes other than the selected genes. The method is useful for determining tumour characteristics in a tissue sample taken from a patient. The present sequence represents a human lipid-associated gene related cDNA sequence, which is used in the exemplification of the present invention

CC

CC Revised record issued on 11-JUN-2007 : Enhanced with precomputed information from BOND.

XX

SQ Sequence 3424 BP; 1134 A; 618 C; 709 G; 963 T; 0 U; 0 Other;

| | | | | | | | | | |
|-----------------------|--------|--------------|-------|------------|----|--------|-------|------|----|
| Query Match | 100.0% | Score | 3424; | DB | 1; | Length | 3424; | | |
| Best Local Similarity | 100.0% | | | | | | | | |
| Matches | 3424; | Conservative | 0; | Mismatches | 0; | Indels | 0; | Gaps | 0; |

Qy

| | | | |
|---|---------------------------------------|------------------------|----|
| 1 | AGGATCAGAACATGCCTCCAAGACCATCATCAGGTGA | ACTGTGGGCATCCACTTGTATG | 60 |
| | | | |

Db

| | | | |
|---|---------------------------------------|------------------------|----|
| 1 | AGGATCAGAACATGCCTCCAAGACCATCATCAGGTGA | ACTGTGGGCATCCACTTGTATG | 60 |
| | | | |

Qy

| | | | |
|----|-------------------------------------|-------------------------|-----|
| 61 | CCCCCAAGAATCCTAGTGGATGTTACTACCAAATG | GAATGATAGTGACTTTAGAATGC | 120 |
| | | | |

Db

| | | | |
|----|-------------------------------------|-------------------------|-----|
| 61 | CCCCCAAGAATCCTAGTGGATGTTACTACCAAATG | GAATGATAGTGACTTTAGAATGC | 120 |
| | | | |

Qy

| | | | | |
|-----|-----------------------|---------------|--------------------------|-----|
| 121 | CTCCGTGAGGCTACATTAGTA | ACTATAAGCATGA | ACTATTAAAGAAGCAAGAAAATAC | 180 |
| | | | | |

Db

| | | | | |
|-----|-----------------------|---------------|--------------------------|-----|
| 121 | CTCCGTGAGGCTACATTAGTA | ACTATAAGCATGA | ACTATTAAAGAAGCAAGAAAATAC | 180 |
| | | | | |

Qy

| | | | | |
|-----|---------------------------|-------------------|---------------|-----|
| 181 | CCTCTCCATCAACTTCTCAAGATGA | ATCTTCTACATTTCGTA | AGTGTACCAAGAA | 240 |
| | | | | |

| | | | |
|----|-----|---|-----|
| Db | 181 | CCTCTCCATCAACTTCTCAAGATGAATCTTCTACATTTCTGTAAGTGTACCCAAGAA | 240 |
| Qy | 241 | GCAGAAAGGGAGAATTTCGATGAAACAAGACGACTTGTGATCTCGGTTTCAA | 300 |
| Db | 241 | | |
| Db | 241 | GCAGAAAGGGAGAATTTCGATGAAACAAGACGACTTGTGATCTCGGTTTCAA | 300 |
| Qy | 301 | CCATTTAAAAGTAATTGAACCACTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA | 360 |
| Db | 301 | | |
| Db | 301 | CCATTTAAAAGTAATTGAACCACTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA | 360 |
| Qy | 361 | ATTGGTTTGCTATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTA | 420 |
| Db | 361 | | |
| Db | 361 | ATTGGTTTGCTATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTA | 420 |
| Qy | 421 | CAGGACTTCCGAAGAAATTCTTAATGTTGTAAGAAGCTGTGGATCTTAGGGATCTT | 480 |
| Db | 421 | | |
| Db | 421 | CAGGACTTCCGAAGAAATTCTTAATGTTGTAAGAAGCTGTGGATCTTAGGGATCTT | 480 |
| Qy | 481 | AATTCCACCTCATAGTAGAGCAATGTATGCTATCGCCACATGTAGAACACCAGAG | 540 |
| Db | 481 | | |
| Db | 481 | AATTCCACCTCATAGTAGAGCAATGTATGCTATCGCCACATGTAGAACACCAGAG | 540 |
| Qy | 541 | CTGCCAAAGCACATATAATAAAATTGGATAGAGGCCAATAATAGGGTGAATTGGTA | 600 |
| Db | 541 | | |
| Db | 541 | CTGCCAAAGCACATATAATAAAATTGGATAGAGGCCAATAATAGGGTGAATTGGTA | 600 |
| Qy | 601 | ATAGTTCTCAAATAATGACAAGCAGAACTATCTGAAATCAACCATGACTGTGTG | 660 |
| Db | 601 | | |
| Db | 601 | ATAGTTCTCAAATAATGACAAGCAGAACTATCTGAAATCAACCATGACTGTGTG | 660 |
| Qy | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTAGAACTATGTTGCTATCATCT | 720 |
| Db | 661 | | |
| Db | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTAGAACTATGTTGCTATCATCT | 720 |
| Qy | 721 | GAACAATTAAACTCTGTGTTTAGAATATCAGGGCAAGTACATTTAAAAGTGTGGA | 780 |
| Db | 721 | | |
| Db | 721 | GAACAATTAAACTCTGTGTTTAGAATATCAGGGCAAGTACATTTAAAAGTGTGGA | 780 |
| Qy | 781 | TGTGATGAATACTCCTAGAAAAATCCTCTGAGTCAGTATAAGTATATAAGCTGT | 840 |
| Db | 781 | | |
| Db | 781 | TGTGATGAATACTCCTAGAAAAATCCTCTGAGTCAGTATAAGTATATAAGCTGT | 840 |
| Qy | 841 | ATAATGTTGGGAGGATGCCAATTGAAAGATGATGGCTAAAGAAAGCCTTATTCTCAA | 900 |
| Db | 841 | | |
| Db | 841 | ATAATGTTGGGAGGATGCCAATTGAAAGATGATGGCTAAAGAAAGCCTTATTCTCAA | 900 |
| Qy | 901 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 960 |
| Db | 901 | | |
| Db | 901 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 960 |

| | | | |
|----|------|--|------|
| Qy | 961 | TATATGAATGGAGAAACATCTACAAAATCCCTTGGGTATAAATAGAGCACTCAGAATA | 1020 |
| | | | |
| Db | 961 | TATATGAATGGAGAAACATCTACAAAATCCCTTGGGTATAAATAGAGCACTCAGAATA | 1020 |
| Qy | 1021 | AAAATTCTTGCAACCTACGTGAATCTAAATATCGAGACATTGACAAGATTATGTT | 1080 |
| | | | |
| Db | 1021 | AAAATTCTTGCAACCTACGTGAATCTAAATATCGAGACATTGACAAGATTATGTT | 1080 |
| Qy | 1081 | CGAACAGGTATCTACCATGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1140 |
| | | | |
| Db | 1081 | CGAACAGGTATCTACCATGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1140 |
| Qy | 1141 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATACATTCTGATCTT | 1200 |
| | | | |
| Db | 1141 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATACATTCTGATCTT | 1200 |
| Qy | 1201 | CCTCGTGTGTCGACTTGCCTTCCATTGCTCTGTAAAGGCCGAAAGGGTGTAAA | 1260 |
| | | | |
| Db | 1201 | CCTCGTGTGTCGACTTGCCTTCCATTGCTCTGTAAAGGCCGAAAGGGTGTAAA | 1260 |
| Qy | 1261 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTA | 1320 |
| | | | |
| Db | 1261 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTA | 1320 |
| Qy | 1321 | GTATCTGAAAAATGGCTTGAATCTTGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| | | | |
| Db | 1321 | GTATCTGAAAAATGGCTTGAATCTTGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| Qy | 1381 | AACCCTATTGGTGTACTGGATCAAATCAAATAAGAAACTCCATGCTTAGAGTTGGAG | 1440 |
| | | | |
| Db | 1381 | AACCCTATTGGTGTACTGGATCAAATCAAATAAGAAACTCCATGCTTAGAGTTGGAG | 1440 |
| Qy | 1441 | TTTGACTIONGGTCAGCAGTGTGGTAAAGTCCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |
| | | | |
| Db | 1441 | TTTGACTIONGGTCAGCAGTGTGGTAAAGTCCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |
| Qy | 1501 | AATTGGTCTGTATCCGAGAAGCAGGATTAGCTATTCCCACGCAGGACTGAGTAACAGA | 1560 |
| | | | |
| Db | 1501 | AATTGGTCTGTATCCGAGAAGCAGGATTAGCTATTCCCACGCAGGACTGAGTAACAGA | 1560 |
| Qy | 1561 | CTAGCTAGAGACAATGAATTAAGGGAAAATGACAAAGAACAGCTCAAAGCAATTCTACA | 1620 |
| | | | |
| Db | 1561 | CTAGCTAGAGACAATGAATTAAGGGAAAATGACAAAGAACAGCTCAAAGCAATTCTACA | 1620 |
| Qy | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAGATTCTATGGAGTCACAGACAC | 1680 |
| | | | |
| Db | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAGATTCTATGGAGTCACAGACAC | 1680 |

| | | | |
|----|------|--|------|
| Qy | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGTCGTAAATGGAATTCT | 1740 |
| | | | |
| Db | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGTCGTAAATGGAATTCT | 1740 |
| | | | |
| Qy | 1741 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAAGATTGGCCTCCAATCAAACCTGAA | 1800 |
| | | | |
| Db | 1741 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAAGATTGGCCTCCAATCAAACCTGAA | 1800 |
| | | | |
| Qy | 1801 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCCTATGGTCGAGGTTTGCTGTT | 1860 |
| | | | |
| Db | 1801 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCCTATGGTCGAGGTTTGCTGTT | 1860 |
| | | | |
| Qy | 1861 | CGGTGCTTGGAAAAATTTAACAGATGACAAACTTCTCAGTATTAAATTCACTAGTAGTA | 1920 |
| | | | |
| Db | 1861 | CGGTGCTTGGAAAAATTTAACAGATGACAAACTTCTCAGTATTAAATTCACTAGTAGTA | 1920 |
| | | | |
| Qy | 1921 | CAGGTCTAAACATATTGGATAACTTGCTGTGAGATTTTACTGAAGAAA | 1980 |
| | | | |
| Db | 1921 | CAGGTCTAAACATATTGGATAACTTGCTGTGAGATTTTACTGAAGAAA | 1980 |
| | | | |
| Qy | 1981 | GCATTGACTAATCAAAGGATTGGGCACTTTTCTTTGGCATTAAATCTGAGATGCAC | 2040 |
| | | | |
| Db | 1981 | GCATTGACTAATCAAAGGATTGGGCACTTTTCTTTGGCATTAAATCTGAGATGCAC | 2040 |
| | | | |
| Qy | 2041 | AATAAAACAGTTAGCCAGAGGTTGGCCTGCTTTGGAGTCCTATTGCGTCATGTGGG | 2100 |
| | | | |
| Db | 2041 | AATAAAACAGTTAGCCAGAGGTTGGCCTGCTTTGGAGTCCTATTGCGTCATGTGGG | 2100 |
| | | | |
| Qy | 2101 | ATGTATTGAAGCACCTGAATAGGCAAGTCGAGGCAATGGAAAGCTCATTAACCTA | 2160 |
| | | | |
| Db | 2101 | ATGTATTGAAGCACCTGAATAGGCAAGTCGAGGCAATGGAAAGCTCATTAACCTA | 2160 |
| | | | |
| Qy | 2161 | GACATTCTAAACAGGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTT | 2220 |
| | | | |
| Db | 2161 | GACATTCTAAACAGGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTT | 2220 |
| | | | |
| Qy | 2221 | GAGCAAATGAGGCACCAGATTCTAGGGATGCCCTACAGGGCTTGCTCTCTAAAC | 2280 |
| | | | |
| Db | 2221 | GAGCAAATGAGGCACCAGATTCTAGGGATGCCCTACAGGGCTTGCTCTCTAAAC | 2280 |
| | | | |
| Qy | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTAAAGAGTGTGCAATTATGCTTCTGCAAAA | 2340 |
| | | | |
| Db | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTAAAGAGTGTGCAATTATGCTTCTGCAAAA | 2340 |
| | | | |
| Qy | 2341 | AGGCCACTGTGGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTCAGAAC | 2400 |
| | | | |
| Db | 2341 | AGGCCACTGTGGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTCAGAAC | 2400 |
| | | | |
| Qy | 2401 | AATGAGATCATTTAAAAATGGGGATGATTACGGCAAGATATGCTAACACTCAAATT | 2460 |

| | | | |
|----|------|---|------|
| Db | 2401 | AATGAGATCATTTAAAAATGGGATGATTACGGCAAGATATGCTAACACTCAAATT | 2460 |
| Qy | 2461 | ATTCGTATTATGGAAAATATCTGGAAATCAAGGTCTGATCTCGAATGTTACCTTAT | 2520 |
| Db | 2461 | ATTCGTATTATGGAAAATATCTGGAAATCAAGGTCTGATCTCGAATGTTACCTTAT | 2520 |
| Qy | 2521 | GGTTGTCTGCAATCGGTGACTGTGTGGACTTATTGAGGTGGCGAAATTCTCACACT | 2580 |
| Db | 2521 | GGTTGTCTGCAATCGGTGACTGTGTGGACTTATTGAGGTGGCGAAATTCTCACACT | 2580 |
| Qy | 2581 | ATTATGCAAATTCACTGCAAAGGCCTGAAAGGTGACTGCAGTTAACAGCCACACA | 2640 |
| Db | 2581 | ATTATGCAAATTCACTGCAAAGGCCTGAAAGGTGACTGCAGTTAACAGCCACACA | 2640 |
| Qy | 2641 | CTACATCAGTGGCTAAAGACAAGAACAAAGGAGAAATATGATGCAGCCATTGACCTG | 2700 |
| Db | 2641 | CTACATCAGTGGCTAAAGACAAGAACAAAGGAGAAATATGATGCAGCCATTGACCTG | 2700 |
| Qy | 2701 | TTTACACGTTCATGTGCTGGACTGTGTAGCTACCTTCATTTGGAAATTGGAGATCGT | 2760 |
| Db | 2701 | TTTACACGTTCATGTGCTGGACTGTGTAGCTACCTTCATTTGGAAATTGGAGATCGT | 2760 |
| Qy | 2761 | CACAATAGTAACATCATGGTAAAGACGATGGACAATGTTCATATAGATTGGACAC | 2820 |
| Db | 2761 | CACAATAGTAACATCATGGTAAAGACGATGGACAATGTTCATATAGATTGGACAC | 2820 |
| Qy | 2821 | TTTTGGATCACAAGAAGAAAAATTGGTATAACGAGAACGTGTGCCATTGTTTG | 2880 |
| Db | 2821 | TTTTGGATCACAAGAAGAAAAATTGGTATAACGAGAACGTGTGCCATTGTTTG | 2880 |
| Qy | 2881 | ACACAGGATTCTTAATAGTGATTAGTAAAGGAGCCAAAGAACATGCACAAAGACAAGAGAA | 2940 |
| Db | 2881 | ACACAGGATTCTTAATAGTGATTAGTAAAGGAGCCAAAGAACATGCACAAAGACAAGAGAA | 2940 |
| Qy | 2941 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGTATTGACAGCATGCCAAT | 3000 |
| Db | 2941 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGTATTGACAGCATGCCAAT | 3000 |
| Qy | 3001 | CTCTCATAAAATCTTCTCAATGATGCTGGCTCTGGAAATGCCAGAACTACAATCTTT | 3060 |
| Db | 3001 | CTCTCATAAAATCTTCTCAATGATGCTGGCTCTGGAAATGCCAGAACTACAATCTTT | 3060 |
| Qy | 3061 | GATGACATTGCATACATCGAAAGACCTAGCCTTAGATAAAACTGAGCAAGAGGCTTG | 3120 |
| Db | 3061 | GATGACATTGCATACATCGAAAGACCTAGCCTTAGATAAAACTGAGCAAGAGGCTTG | 3120 |
| Qy | 3121 | GAGTATTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT | 3180 |
| | | | |

Db 3121 GAGTATTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT 3180
 Qy 3181 TGGATCTCCACACAATTAAACAGCATGCATTGAACTGAAAGATAACTGAGAAAATGAAA 3240
 |||||||
 Db 3181 TGGATCTCCACACAATTAAACAGCATGCATTGAACTGAAAGATAACTGAGAAAATGAAA 3240
 |||||||
 Qy 3241 GCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGAAAGACCGATTGCA 3300
 |||||||
 Db 3241 GCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGAAAGACCGATTGCA 3300
 |||||||
 Qy 3301 TAGGAATTGCACAATCCATGAACAGCATTAGATTACAGCAAGAACAGAAATAAAACT 3360
 |||||||
 Db 3301 TAGGAATTGCACAATCCATGAACAGCATTAGATTACAGCAAGAACAGAAATAAAACT 3360
 |||||||
 Qy 3361 ATATAATTAAATAATGTAAACGCAAACAGGGTTGATAGCACTTAAACTAGTTCATTC 3420
 |||||||
 Db 3361 ATATAATTAAATAATGTAAACGCAAACAGGGTTGATAGCACTTAAACTAGTTCATTC 3420
 |||||||
 Qy 3421 AAAA 3424
 |||||
 Db 3421 AAAA 3424

RESULT 3

ADE85076

ID ADE85076 standard; DNA; 3424 BP.

XX

AC ADE85076;

XX

DT 11-JUN-2007 (revised)

DT 29-JAN-2004 (first entry)

XX

DE Farnesyl transferase inhibitor modulated leukemia associated gene #295.

XX

KW ss; cytostatic; farnesyl transferase inhibitor; gene expression;

KW quinolinone; leukemia; cancer.

XX

OS Homo sapiens.

XX

PN WO2003038129-A2.

XX

PD 08-MAY-2003.

XX

PF 30-OCT-2002; 2002WO-US034784.

XX

PR 30-OCT-2001; 2001US-0338997P.

PR 30-OCT-2001; 2001US-0340081P.

PR 30-OCT-2001; 2001US-0340938P.

PR 30-OCT-2001; 2001US-0341012P.

XX
 PA (ORTH) ORTHO CLINICAL DIAGNOSTICS INC.
 XX
 PI Raponi M;
 XX
 DR WPI; 2003-513497/48.
 DR PC:NCBI; gi472990.
 DR PC_ENCPRO:NCBI; gi472991.
 XX
 PT Determining whether a patient will respond to treatment with a farnesyl transferase inhibitor, by analyzing the expression of gene that is differentially modulated in the presence of the inhibitor.
 XX
 PS Disclosure; SEQ ID NO 295; 346pp; English.
 XX
 CC The invention relates to a method of determining whether a patient will respond to treatment with a farnesyl transferase inhibitor (FTI), by analyzing the expression of gene that is differentially modulated in the presence of an FTI. The method is useful for determining whether a patient will respond to treatment with a FTI such as (B)-6-[amino(4-chlorophenyl)(1-methyl-1H-imidazol-5-yl)methyl]-4-(3-chlorophenyl)-1-methyl-2-(1H)quinolinone, monitoring the therapy of a patient, treating a patient with leukemia with FTI if the analysis indicates that the patient will respond. This sequence corresponds to a gene whose expression may be modulated in the presence of FTI.
 CC
 CC Revised record issued on 11-JUN-2007 : Enhanced with precomputed information from BOND.
 XX
 SQ Sequence 3424 BP; 1134 A; 618 C; 709 G; 963 T; 0 U; 0 Other;
 Query Match 100.0%; Score 3424; DB 2; Length 3424;
 Best Local Similarity 100.0%;
 Matches 3424; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Qy 1 AGGATCAGAACATGCCTCCAAGACCATCATCAGGTGAAGTGTGGGCATCCACTTGATG 60
 |||||||
 Db 1 AGGATCAGAACATGCCTCCAAGACCATCATCAGGTGAAGTGTGGGCATCCACTTGATG 60
 |||||||
 Qy 61 CCCCCAAGAATCCTAGTGGATGTTACTACCAAATGGAATGATAGTGACTTTAGAATGC 120
 |||||||
 Db 61 CCCCCAAGAATCCTAGTGGATGTTACTACCAAATGGAATGATAGTGACTTTAGAATGC 120
 |||||||
 Qy 121 CTCCGTGAGGCTACATTAGTAACATAAAAGCATGAACATTAAAGAAGCAAGAAAATAC 180
 |||||||
 Db 121 CTCCGTGAGGCTACATTAGTAACATAAAAGCATGAACATTAAAGAAGCAAGAAAATAC 180
 |||||||
 Qy 181 CCTCTCCATCAACTTCTCAAGATGAATCTTCTACATTTGTAAGTGTACCAAGAA 240
 |||||||

| | | | |
|----|-----|---|-----|
| Db | 181 | CCTCTCCATCAACTTCTCAAGATGAATCTTCTACATTTCTGTAAGTGTACCCAAGAA | 240 |
| Qy | 241 | GCAGAAAGGGAGAATTTCGATGAAACAAGACGACTTGTGATCTCGGTTTCAA | 300 |
| Db | 241 | | |
| Db | 241 | GCAGAAAGGGAGAATTTCGATGAAACAAGACGACTTGTGATCTCGGTTTCAA | 300 |
| Qy | 301 | CCATTTAAAAGTAATTGAACCACTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA | 360 |
| Db | 301 | | |
| Db | 301 | CCATTTAAAAGTAATTGAACCACTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA | 360 |
| Qy | 361 | ATTGGTTTGCATCGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTA | 420 |
| Db | 361 | | |
| Db | 361 | ATTGGTTTGCATCGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTA | 420 |
| Qy | 421 | CAGGACTTCCGAAGAAATTCTTAATGTTGTAAGAAGCTGTGGATCTTAGGGATCTT | 480 |
| Db | 421 | | |
| Db | 421 | CAGGACTTCCGAAGAAATTCTTAATGTTGTAAGAAGCTGTGGATCTTAGGGATCTT | 480 |
| Qy | 481 | AATTCAACCTCATAGTAGAGCAATGTATGCTATCGCCACATGTAGAACACCAGAG | 540 |
| Db | 481 | | |
| Db | 481 | AATTCAACCTCATAGTAGAGCAATGTATGCTATCGCCACATGTAGAACACCAGAG | 540 |
| Qy | 541 | CTGCCAAAGCACATATAATAAAATTGGATAGAGGCCAATAATAGGGTGAATTGGTA | 600 |
| Db | 541 | | |
| Db | 541 | CTGCCAAAGCACATATAATAAAATTGGATAGAGGCCAATAATAGGGTGAATTGGTA | 600 |
| Qy | 601 | ATAGTTCTCAAATAATGACAAGCAGAACTATCTGAAATCAACCATGACTGTGTG | 660 |
| Db | 601 | | |
| Db | 601 | ATAGTTCTCAAATAATGACAAGCAGAACTATCTGAAATCAACCATGACTGTGTG | 660 |
| Qy | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTAGAACTATGTTGCTATCATCT | 720 |
| Db | 661 | | |
| Db | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTAGAACTATGTTGCTATCATCT | 720 |
| Qy | 721 | GAACAATTAAACTCTGTGTTTAGAATATCAGGGCAAGTACATTTAAAAGTGTGGA | 780 |
| Db | 721 | | |
| Db | 721 | GAACAATTAAACTCTGTGTTTAGAATATCAGGGCAAGTACATTTAAAAGTGTGGA | 780 |
| Qy | 781 | TGTGATGAATACCTCTAGAAAAATCCTCTGAGTCAGTATAAGTATATAAGCTGT | 840 |
| Db | 781 | | |
| Db | 781 | TGTGATGAATACCTCTAGAAAAATCCTCTGAGTCAGTATAAGTATATAAGCTGT | 840 |
| Qy | 841 | ATAATGTTGGGAGGATGCCAATTGAAAGATGATGGCTAAAGAAAGCCTTATTCTCAA | 900 |
| Db | 841 | | |
| Db | 841 | ATAATGTTGGGAGGATGCCAATTGAAAGATGATGGCTAAAGAAAGCCTTATTCTCAA | 900 |
| Qy | 901 | CTGCCAATGGACTGTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 960 |
| Db | 901 | | |
| Db | 901 | CTGCCAATGGACTGTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 960 |

| | | | |
|----|------|---|------|
| Qy | 961 | TATATGAATGGAGAAACATCTACAAAATCCCTTGGGTATAAATAGAGCACTCAGAATA | 1020 |
| | | | |
| Db | 961 | TATATGAATGGAGAAACATCTACAAAATCCCTTGGGTATAAATAGAGCACTCAGAATA | 1020 |
| Qy | 1021 | AAAATTCTTGCAACCTACGTGAATCTAAATATCGAGACATTGACAAGATTATGTT | 1080 |
| | | | |
| Db | 1021 | AAAATTCTTGCAACCTACGTGAATCTAAATATCGAGACATTGACAAGATTATGTT | 1080 |
| Qy | 1081 | CGAACAGGTATCTACCATGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1140 |
| | | | |
| Db | 1081 | CGAACAGGTATCTACCATGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1140 |
| Qy | 1141 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATACATTCTGATCTT | 1200 |
| | | | |
| Db | 1141 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATACATTCTGATCTT | 1200 |
| Qy | 1201 | CCTCGTGTGTCGACTTGCCTTCCATTGCTCTGTAAAGGCCGAAAGGGTGTAAA | 1260 |
| | | | |
| Db | 1201 | CCTCGTGTGTCGACTTGCCTTCCATTGCTCTGTAAAGGCCGAAAGGGTGTAAA | 1260 |
| Qy | 1261 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTA | 1320 |
| | | | |
| Db | 1261 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTA | 1320 |
| Qy | 1321 | GTATCTGAAAAATGGCTTGAATCTTGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| | | | |
| Db | 1321 | GTATCTGAAAAATGGCTTGAATCTTGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| Qy | 1381 | AACCCTATTGGTGTACTGGATCAAATCAAATAAGAAACTCCATGCTTAGAGTTGGAG | 1440 |
| | | | |
| Db | 1381 | AACCCTATTGGTGTACTGGATCAAATCAAATAAGAAACTCCATGCTTAGAGTTGGAG | 1440 |
| Qy | 1441 | TTGACTGGTCAGCAGTGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |
| | | | |
| Db | 1441 | TTGACTGGTCAGCAGTGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |
| Qy | 1501 | AATTGGTCTGTATCCGAGAAGCAGGATTAGCTATTCCACGCAGGACTGAGTAACAGA | 1560 |
| | | | |
| Db | 1501 | AATTGGTCTGTATCCGAGAAGCAGGATTAGCTATTCCACGCAGGACTGAGTAACAGA | 1560 |
| Qy | 1561 | CTAGCTAGAGACAATGAATTAAGGGAAAATGACAAAGAACAGCTCAAAGCAATTCTACA | 1620 |
| | | | |
| Db | 1561 | CTAGCTAGAGACAATGAATTAAGGGAAAATGACAAAGAACAGCTCAAAGCAATTCTACA | 1620 |
| Qy | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAGATTCTATGGAGTCACAGACAC | 1680 |
| | | | |
| Db | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAGATTCTATGGAGTCACAGACAC | 1680 |

| | | | |
|----|------|--|------|
| Qy | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGTCGTAAATGGAATTCT | 1740 |
| | | | |
| Db | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGTCGTAAATGGAATTCT | 1740 |
| | | | |
| Qy | 1741 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAAGATTGGCCTCCAATCAAACCTGAA | 1800 |
| | | | |
| Db | 1741 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAAGATTGGCCTCCAATCAAACCTGAA | 1800 |
| | | | |
| Qy | 1801 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCCTATGGTCGAGGTTTGCTGTT | 1860 |
| | | | |
| Db | 1801 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCCTATGGTCGAGGTTTGCTGTT | 1860 |
| | | | |
| Qy | 1861 | CGGTGCTTGGAAAAATTTAACAGATGACAAACTTCTCAGTATTAAATTCACTAGTA | 1920 |
| | | | |
| Db | 1861 | CGGTGCTTGGAAAAATTTAACAGATGACAAACTTCTCAGTATTAAATTCACTAGTA | 1920 |
| | | | |
| Qy | 1921 | CAGGTCTAAACATATTGGATAACTTGCTGTGAGATTTTACTGAAGAAA | 1980 |
| | | | |
| Db | 1921 | CAGGTCTAAACATATTGGATAACTTGCTGTGAGATTTTACTGAAGAAA | 1980 |
| | | | |
| Qy | 1981 | GCATTGACTAATCAAAGGATTGGGCACTTTTCTTTGGCATTAAATCTGAGATGCAC | 2040 |
| | | | |
| Db | 1981 | GCATTGACTAATCAAAGGATTGGGCACTTTTCTTTGGCATTAAATCTGAGATGCAC | 2040 |
| | | | |
| Qy | 2041 | AATAAAACAGTTAGCCAGAGGTTGGCCTGCTTTGGAGTCCTATTGCGTCATGTGGG | 2100 |
| | | | |
| Db | 2041 | AATAAAACAGTTAGCCAGAGGTTGGCCTGCTTTGGAGTCCTATTGCGTCATGTGGG | 2100 |
| | | | |
| Qy | 2101 | ATGTATTGAAGCACCTGAATAGGCAAGTCGAGGCAATGGAAAGCTCATTAACCTA | 2160 |
| | | | |
| Db | 2101 | ATGTATTGAAGCACCTGAATAGGCAAGTCGAGGCAATGGAAAGCTCATTAACCTA | 2160 |
| | | | |
| Qy | 2161 | GACATTCTAAACAGGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTT | 2220 |
| | | | |
| Db | 2161 | GACATTCTAAACAGGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTT | 2220 |
| | | | |
| Qy | 2221 | GAGCAAATGAGGCACCAGATTCTAGGATGCCCTACAGGGCTTGCTCTCTAAAC | 2280 |
| | | | |
| Db | 2221 | GAGCAAATGAGGCACCAGATTCTAGGATGCCCTACAGGGCTTGCTCTCTAAAC | 2280 |
| | | | |
| Qy | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTAAAGAGTGTGCAATTATGCTTCTGCAAAA | 2340 |
| | | | |
| Db | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTAAAGAGTGTGCAATTATGCTTCTGCAAAA | 2340 |
| | | | |
| Qy | 2341 | AGGCCACTGTGGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTCAGAAC | 2400 |
| | | | |
| Db | 2341 | AGGCCACTGTGGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTCAGAAC | 2400 |
| | | | |
| Qy | 2401 | AATGAGATCATTTAAAAATGGGGATGATTACGGCAAGATATGCTAACACTCAAATT | 2460 |

| | | | |
|----|------|---|------|
| Db | 2401 | AATGAGATCATTTAAAAATGGGATGATTACGGCAAGATATGCTAACACTCAAATT | 2460 |
| Qy | 2461 | ATTCGTATTATGGAAAATATCTGGAAATCAAGGTCTGATCTCGAATGTTACCTTAT | 2520 |
| Db | 2461 | ATTCGTATTATGGAAAATATCTGGAAATCAAGGTCTGATCTCGAATGTTACCTTAT | 2520 |
| Qy | 2521 | GGTTGTCTGCAATCGGTGACTGTGTGGACTTATTGAGGTGGCGAAATTCTCACACT | 2580 |
| Db | 2521 | GGTTGTCTGCAATCGGTGACTGTGTGGACTTATTGAGGTGGCGAAATTCTCACACT | 2580 |
| Qy | 2581 | ATTATGCAAATTCACTGCAAAGGCCTGAAAGGTGACTGCAGTTAACAGCCACACA | 2640 |
| Db | 2581 | ATTATGCAAATTCACTGCAAAGGCCTGAAAGGTGACTGCAGTTAACAGCCACACA | 2640 |
| Qy | 2641 | CTACATCAGTGGCTCAAAGACAAGAACAAAGGAGAAATATGATGCAGCCATTGACCTG | 2700 |
| Db | 2641 | CTACATCAGTGGCTCAAAGACAAGAACAAAGGAGAAATATGATGCAGCCATTGACCTG | 2700 |
| Qy | 2701 | TTTACACGTTCATGTGCTGGACTGTGTAGCTACCTTCATTTGGAAATTGGAGATCGT | 2760 |
| Db | 2701 | TTTACACGTTCATGTGCTGGACTGTGTAGCTACCTTCATTTGGAAATTGGAGATCGT | 2760 |
| Qy | 2761 | CACAATAGTAACATCATGGTAAAGACGATGGACAACGTGTTCATATAGATTTGGACAC | 2820 |
| Db | 2761 | CACAATAGTAACATCATGGTAAAGACGATGGACAACGTGTTCATATAGATTTGGACAC | 2820 |
| Qy | 2821 | TTTTGGATCACAAGAAGAAAAATTGGTTATAACGAGAACGTGTGCCATTGTTTG | 2880 |
| Db | 2821 | TTTTGGATCACAAGAAGAAAAATTGGTTATAACGAGAACGTGTGCCATTGTTTG | 2880 |
| Qy | 2881 | ACACAGGATTCTTAATAGTGATTAGTAAAGGAGGCCAAGAACATGCACAAAGACAAGAGAA | 2940 |
| Db | 2881 | ACACAGGATTCTTAATAGTGATTAGTAAAGGAGGCCAAGAACATGCACAAAGACAAGAGAA | 2940 |
| Qy | 2941 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGTATTGACAGCATGCCAAT | 3000 |
| Db | 2941 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGTATTGACAGCATGCCAAT | 3000 |
| Qy | 3001 | CTCTCATAAAATCTTCTCAATGATGCTGGCTCTGGAAATGCCAGAACTACAATCTTT | 3060 |
| Db | 3001 | CTCTCATAAAATCTTCTCAATGATGCTGGCTCTGGAAATGCCAGAACTACAATCTTT | 3060 |
| Qy | 3061 | GATGACATTGCATACATCGAAAGACCTAGCCTTAGATAAAACTGAGCAAGAGGCTTG | 3120 |
| Db | 3061 | GATGACATTGCATACATCGAAAGACCTAGCCTTAGATAAAACTGAGCAAGAGGCTTG | 3120 |
| Qy | 3121 | GAGTATTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT | 3180 |
| | | | |

Db 3121 GAGTATTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT 3180
 Qy 3181 TGGATCTCCACACAATTAAACAGCATGCATTGAACTGAAAGATAACTGAGAAAATGAAA 3240
 |||||||
 Db 3181 TGGATCTCCACACAATTAAACAGCATGCATTGAACTGAAAGATAACTGAGAAAATGAAA 3240
 |||||||
 Qy 3241 GCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGAAAGACCGATTGCA 3300
 |||||||
 Db 3241 GCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGAAAGACCGATTGCA 3300
 |||||||
 Qy 3301 TAGGAATTGCACAATCCATGAACAGCATTAGATTACAGCAAGAACAGAAATAAAACT 3360
 |||||||
 Db 3301 TAGGAATTGCACAATCCATGAACAGCATTAGATTACAGCAAGAACAGAAATAAAACT 3360
 |||||||
 Qy 3361 ATATAATTAAATAATGTAAACGCAAACAGGGTTGATAGCACTTAAACTAGTTCATTTC 3420
 |||||||
 Db 3361 ATATAATTAAATAATGTAAACGCAAACAGGGTTGATAGCACTTAAACTAGTTCATTTC 3420
 |||||||
 Qy 3421 AAAA 3424
 ||||
 Db 3421 AAAA 3424

RESULT 4

ADZ00490

ID ADZ00490 standard; cDNA; 3424 BP.

XX

AC ADZ00490;

XX

DT 11-JUN-2007 (revised)

DT 16-JUN-2005 (first entry)

XX

DE p110-beta coding sequence.

XX

KW ss; Anorectic; Antidiabetic; p110-beta; phosphoinositide 3-kinase; p85;

KW ras; insulin resistance; obesity; gene.

XX

OS Homo sapiens.

XX

FH Key Location/Qualifiers

FT CDS 13..3219

FT /*tag= a

XX

PN WO2005031341-A2.

XX

PD 07-APR-2005.

XX

PF 28-SEP-2004; 2004WO-IB003926.

XX

PR 29-SEP-2003; 2003US-0507226P.
 PR 13-JUL-2004; 2004US-0587333P.

XX
 PA (PFIZ) PFIZER HEALTH AB.

XX
 PI Bougneres P;

XX DR WPI; 2005-273421/28.

DR P-PSDB; ADZ00491.

DR GENBANK; Z29090.

DR PC:NCBI; gi472990.

DR PC_ENCPRO:NCBI; gi472991.

XX PT Predicting a subject's likelihood of developing insulin resistance,
 PT useful for treating insulin resistance and obesity, comprises determining
 PT in a subject the identity of an allele at position 100 of a specific
 PT sequence.

XX PS Disclosure; SEQ ID NO 2; 88pp; English.

CC This sequence represents the p110-beta gene. p110-beta is a catalytic
 CC subunit of a phosphoinositide 3-kinase, which also comprises a regulatory
 CC subunit of about 85 kD. The p110 protein comprises a kinase domain at the
 CC C-terminus, and a p85 and ras binding domain at the N-terminus. The
 CC method of the invention for predicting a subject's likelihood of
 CC developing insulin resistance comprises determining in a subject the
 CC identity of the nucleotide present at a position corresponding to
 CC position -359 of the p110-beta gene , where the allele comprising the
 CC nucleotide is correlated with an increased or decreased likelihood of
 CC developing insulin resistance. The method of the invention is useful for
 CC treating obesity and insulin resistance and for assessing and conducting
 CC clinical trials of medicaments.

CC Revised record issued on 11-JUN-2007 : Enhanced with precomputed
 CC information from BOND.

XX SQ Sequence 3424 BP; 1134 A; 618 C; 709 G; 963 T; 0 U; 0 Other;

Query Match 100.0%; Score 3424; DB 4; Length 3424;
 Best Local Similarity 100.0%;
 Matches 3424; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AGGATCAGAACAAATGCCTCCAAGACCATCATCAGGTGAACGTGGGGCATCCACTTGTATG 60
 |||||||

Db 1 AGGATCAGAACAAATGCCTCCAAGACCATCATCAGGTGAACGTGGGGCATCCACTTGTATG 60

Qy 61 CCCCCAAGAACCTAGTGGATGTTACTACCAAATGGAATGATAGTGACTTTAGAATGC 120
 |||||||

Db 61 CCCCCAAGAACCTAGTGGATGTTACTACCAAATGGAATGATAGTGACTTTAGAATGC 120

| | | | |
|----|-----|--|-----|
| Qy | 121 | CTCCGTGAGGCATACATTAGTAACATAAAGCATGAACATTAAAGAAGCAAGAAAATAC | 180 |
| | | | |
| Db | 121 | CTCCGTGAGGCATACATTAGTAACATAAAGCATGAACATTAAAGAAGCAAGAAAATAC | 180 |
| Qy | 181 | CCTCTCCATCAACTTCTCAAGATGAATCTTCTACATTTCTGAAGTGTACCCAAGAA | 240 |
| | | | |
| Db | 181 | CCTCTCCATCAACTTCTCAAGATGAATCTTCTACATTTCTGAAGTGTACCCAAGAA | 240 |
| Qy | 241 | GCAGAAAGGGAGAATTGGATGAAACAAGACGACTTGTGATCTCGGTTTTCAA | 300 |
| | | | |
| Db | 241 | GCAGAAAGGGAGAATTGGATGAAACAAGACGACTTGTGATCTCGGTTTTCAA | 300 |
| Qy | 301 | CCATTTTAAAGTAATTGAACCACTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA | 360 |
| | | | |
| Db | 301 | CCATTTTAAAGTAATTGAACCACTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA | 360 |
| Qy | 361 | ATGGTTTGCTATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTA | 420 |
| | | | |
| Db | 361 | ATGGTTTGCTATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTA | 420 |
| Qy | 421 | CAGGACTTCCGAAGAAATATTCTTAATGTTGTAAGAAGCTGTGGATCTTAGGGATCTT | 480 |
| | | | |
| Db | 421 | CAGGACTTCCGAAGAAATATTCTTAATGTTGTAAGAAGCTGTGGATCTTAGGGATCTT | 480 |
| Qy | 481 | AATTCAACCTCATAGTAGAGCAATGTATGTCATCCGCCACATGTAGAACCTCACAGAG | 540 |
| | | | |
| Db | 481 | AATTCAACCTCATAGTAGAGCAATGTATGTCATCCGCCACATGTAGAACCTCACAGAG | 540 |
| Qy | 541 | CTGCCAAAGCACATATATAATAAAATTGGATAGAGGCCAATAATAGGGTGAATTGGTA | 600 |
| | | | |
| Db | 541 | CTGCCAAAGCACATATATAATAAAATTGGATAGAGGCCAATAATAGGGTGAATTGGTA | 600 |
| Qy | 601 | ATAGTTCTCAAATAATGACAAGCAGAAAGTATACTCTGAAAATCAACCAGACTGTGTG | 660 |
| | | | |
| Db | 601 | ATAGTTCTCAAATAATGACAAGCAGAAAGTATACTCTGAAAATCAACCAGACTGTGTG | 660 |
| Qy | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGGCTATCATCT | 720 |
| | | | |
| Db | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGGCTATCATCT | 720 |
| Qy | 721 | GAACAATTAAACTCTGTGTTTAGAATATCAGGGCAAGTACATTAAAGTGTGTGGA | 780 |
| | | | |
| Db | 721 | GAACAATTAAACTCTGTGTTTAGAATATCAGGGCAAGTACATTAAAGTGTGTGGA | 780 |
| Qy | 781 | TGTGATGAATACCTCTAGAAAAATACCTCTGAGTCAGTATAAGTATATAAGAAGCTGT | 840 |
| | | | |
| Db | 781 | TGTGATGAATACCTCTAGAAAAATACCTCTGAGTCAGTATAAGTATATAAGAAGCTGT | 840 |

| | | | |
|----|------|---|------|
| Qy | 841 | ATAATGCTGGGAGGATGCCAATTGAAGATGATGGCTAAAGAAAGCCTTATTCTAA | 900 |
| | | | |
| Db | 841 | ATAATGCTGGGAGGATGCCAATTGAAGATGATGGCTAAAGAAAGCCTTATTCTAA | 900 |
| Qy | 901 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 960 |
| | | | |
| Db | 901 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 960 |
| Qy | 961 | TATATGAATGGAGAACATCTACAAAATCCCTTGGGTATAAATAGAGCACTCAGAATA | 1020 |
| | | | |
| Db | 961 | TATATGAATGGAGAACATCTACAAAATCCCTTGGGTATAAATAGAGCACTCAGAATA | 1020 |
| Qy | 1021 | AAAATTCTTGCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTATGTT | 1080 |
| | | | |
| Db | 1021 | AAAATTCTTGCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTATGTT | 1080 |
| Qy | 1081 | CGAACAGGTATCTACCATTGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1140 |
| | | | |
| Db | 1081 | CGAACAGGTATCTACCATTGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1140 |
| Qy | 1141 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATACATTCTGATCTT | 1200 |
| | | | |
| Db | 1141 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATACATTCTGATCTT | 1200 |
| Qy | 1201 | CCTCGTGTGCTCGACTTGCCTTCCATTGCTCTGTTAAAGGCCGAAAGGGTGTAAA | 1260 |
| | | | |
| Db | 1201 | CCTCGTGTGCTCGACTTGCCTTCCATTGCTCTGTTAAAGGCCGAAAGGGTGTAAA | 1260 |
| Qy | 1261 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTA | 1320 |
| | | | |
| Db | 1261 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTA | 1320 |
| Qy | 1321 | GTATCTGGAAAATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| | | | |
| Db | 1321 | GTATCTGGAAAATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| Qy | 1381 | AACCCTATTGGTGTACTGGATCAAATCAAATAAGAAACTCCATGCTTAGAGTTGGAG | 1440 |
| | | | |
| Db | 1381 | AACCCTATTGGTGTACTGGATCAAATCAAATAAGAAACTCCATGCTTAGAGTTGGAG | 1440 |
| Qy | 1441 | TTGACTGGTCAGCAGTGTGGTAAAGTCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |
| | | | |
| Db | 1441 | TTGACTGGTCAGCAGTGTGGTAAAGTCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |
| Qy | 1501 | AATTGGTCTGTATCCCGAGAACAGCAGGATTAGCTATTCCCACGCAGGACTGAGTAACAGA | 1560 |
| | | | |
| Db | 1501 | AATTGGTCTGTATCCCGAGAACAGCAGGATTAGCTATTCCCACGCAGGACTGAGTAACAGA | 1560 |
| Qy | 1561 | CTAGCTAGAGACAATGAATTAGGGAAAATGACAAAGAACAGCTAAAGCAATTCTACA | 1620 |

| | | | |
|----|------|--|------|
| Db | 1561 | CTAGCTAGAGACAATGAATTAGGGAAATGACAAAGAACAGCTCAAAGCAATTCTACA | 1620 |
| Qy | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAGATTTCTATGGAGTCACAGACAC | 1680 |
| Db | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAGATTTCTATGGAGTCACAGACAC | 1680 |
| Qy | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGCTGTAAATGGAATTCT | 1740 |
| Db | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGCTGTAAATGGAATTCT | 1740 |
| Qy | 1741 | AGAGATGAACTAGCCCAGATGTATTGCTTGGTAAAAGATTGCCCTCCAATCAAACCTGAA | 1800 |
| Db | 1741 | AGAGATGAACTAGCCCAGATGTATTGCTTGGTAAAAGATTGCCCTCCAATCAAACCTGAA | 1800 |
| Qy | 1801 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCCTATGGTCGAGGTTTGCTGTT | 1860 |
| Db | 1801 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCCTATGGTCGAGGTTTGCTGTT | 1860 |
| Qy | 1861 | CGGTGCTTGGAAAAAATATTAACAGATGACAAACTTCTCAGTATTAACTCAGTAGTA | 1920 |
| Db | 1861 | CGGTGCTTGGAAAAAATATTAACAGATGACAAACTTCTCAGTATTAACTCAGTAGTA | 1920 |
| Qy | 1921 | CAGGTCTAAACATATGAACAAATATTGGATAACTTGCTGTGAGATTTACTGAAGAAA | 1980 |
| Db | 1921 | CAGGTCTAAACATATGAACAAATATTGGATAACTTGCTGTGAGATTTACTGAAGAAA | 1980 |
| Qy | 1981 | GCATTGACTAACAGGATGGGCACTTTCTTTGGCATTAAAATCTGAGATGCAC | 2040 |
| Db | 1981 | GCATTGACTAACAGGATGGGCACTTTCTTTGGCATTAAAATCTGAGATGCAC | 2040 |
| Qy | 2041 | AATAAAACAGTTAGCCAGAGGTTGGCCTGCTTGGAGTCCTATTGCGATGTGGG | 2100 |
| Db | 2041 | AATAAAACAGTTAGCCAGAGGTTGGCCTGCTTGGAGTCCTATTGCGATGTGGG | 2100 |
| Qy | 2101 | ATGTATTGAAAGCACCTGAATAGGCAAGTCGAGGAATGGAAAAGCTCATTAACCTA | 2160 |
| Db | 2101 | ATGTATTGAAAGCACCTGAATAGGCAAGTCGAGGAATGGAAAAGCTCATTAACCTA | 2160 |
| Qy | 2161 | GACATTCTAAACAGGAGAGGAAGGATGAAACACAAAGGTACAGATGAAGTTTAGTT | 2220 |
| Db | 2161 | GACATTCTAAACAGGAGAGGAAGGATGAAACACAAAGGTACAGATGAAGTTTAGTT | 2220 |
| Qy | 2221 | GAGCAAATGAGGGCACCAGATTCTAGGATGCCCTACAGGGCTGCTGTCTCTCTAAAC | 2280 |
| Db | 2221 | GAGCAAATGAGGGCACCAGATTCTAGGATGCCCTACAGGGCTGCTGTCTCTCTAAAC | 2280 |
| Qy | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTAAAGAGTGTGCAATTATGTCTCTGCAAAA | 2340 |
| | | CCTGCTCATCAACTAGGAAACCTCAGGCTAAAGAGTGTGCAATTATGTCTCTGCAAAA | |

| | | | |
|----|------|--|------|
| Db | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTTAAAGAGTGTGCAATTATGTCCTCTGCAAAA | 2340 |
| Qy | 2341 | AGGCCACTGTGGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTTCAGAAC | 2400 |
| Db | 2341 | | 2400 |
| Qy | 2401 | AATGAGATCATCTTAAAAATGGGATGATTACGGCAAGATATGCTAACACTCAAATT | 2460 |
| Db | 2401 | | 2460 |
| Qy | 2461 | ATTCGTATTATGGAAAATATCTGCAAATCAAGGTCTGATCTCGAATGTTACCTTAT | 2520 |
| Db | 2461 | | 2520 |
| Qy | 2521 | GGTTGTCTGTCATCGTGACTGTGTGGACTTATTGAGGTGGTGCAGAATTCTCACACT | 2580 |
| Db | 2521 | | 2580 |
| Qy | 2581 | ATTATGCAAATTCACTGCAAAGGCGGCTTGAAGAGTGCAGTCAACAGCCACACA | 2640 |
| Db | 2581 | | 2640 |
| Qy | 2641 | CTACATCAGTGGCTAAAGACAAGAACAAAGGAGAAATATATGATGCAGCCATTGACCTG | 2700 |
| Db | 2641 | | 2700 |
| Qy | 2701 | TTTACACGTTCATGTGCTGGACTGTGTAGCTACCTTCATTTGGAAATTGGAGATCGT | 2760 |
| Db | 2701 | | 2760 |
| Qy | 2761 | CACAATAGTAACATCATGGTAAAGACGATGGACAACGTGTTCATATAGATTGGACAC | 2820 |
| Db | 2761 | | 2820 |
| Qy | 2821 | TTTTGGATCACAAGAAGAAAAATTGGTATAACGAGAACGTGTGCCATTGTTTG | 2880 |
| Db | 2821 | | 2880 |
| Qy | 2881 | ACACAGGATTCTTAATAGTGTAGTAAAGGAGCCCAGAACATGCACAAAGACAAGAGAA | 2940 |
| Db | 2881 | | 2940 |
| Qy | 2941 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGTATTGACAGCATGCCAAT | 3000 |
| Db | 2941 | | 3000 |
| Qy | 3001 | CTCTCATAAAATCTTCTCAATGATGCTGGCTCTGGAATGCCAGAACTACAATCTTT | 3060 |
| Db | 3001 | | 3060 |

Qy 3061 GATGACATTGCATACATCGAAAGACCTAGCCTTAGATAAAACTGAGCAAGAGGCTTG 3120
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 3061 GATGACATTGCATACATCGAAAGACCTAGCCTTAGATAAAACTGAGCAAGAGGCTTG 3120

Qy 3121 GAGTATTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT 3180
 ||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 3121 GAGTATTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT 3180

Qy 3181 TGGATCTCCACACAATTAAACAGCATGCATTGAACTGAAAGATAACTGAGAAAATGAAA 3240
 ||||||||||||||||||||||||||||||||||||||||||||||||
 Db 3181 TGGATCTCCACACAATTAAACAGCATGCATTGAACTGAAAGATAACTGAGAAAATGAAA 3240

Qy 3241 GCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGCAAAGACCGATTGCA 3300
 ||||||||||||||||||||||||||||||||||||||||||||
 Db 3241 GCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGCAAAGACCGATTGCA 3300

Qy 3301 TAGGAATTGCACAATCCATGAACAGCATTAGATTACAGCAAGAACAGAAATAAAATACT 3360
 ||||||||||||||||||||||||||||||||||||||||
 Db 3301 TAGGAATTGCACAATCCATGAACAGCATTAGATTACAGCAAGAACAGAAATAAAATACT 3360

Qy 3361 ATATAATTAAATAATGTAAACGCAAACAGGGTTTGATAGCACTTAAACTAGTTCATTC 3420
 ||||||||||||||||||||||||||||||||||||
 Db 3361 ATATAATTAAATAATGTAAACGCAAACAGGGTTTGATAGCACTTAAACTAGTTCATTC 3420

Qy 3421 AAAA 3424
 ||||
 Db 3421 AAAA 3424

RESULT 5

AEH10445

ID AEH10445 standard; cDNA; 3424 BP.

XX

AC AEH10445;

XX

DT 11-JUN-2007 (revised)

DT 01-JUN-2006 (first entry)

XX

DE PIK3CA cDNA SEQ ID 831.

XX

KW gene expression; prognosis; diagnosis; DNA microarray;

KW colorectal disease; colon tumor; colorectal tumor; cytostatic;

KW gastrointestinal disease; neoplasm; ss.

XX

OS Unidentified.

XX

PN WO2005054508-A2.

XX

PD 16-JUN-2005.

XX

PF 01-DEC-2004; 2004WO-IB004323.

XX

PR 01-DEC-2003; 2003US-0525987P.

PR 01-DEC-2004; 2004US-00000688.

XX

PA (IPSO-) IPSOGEN.

PA (INRM) INSERM INST NAT SANTE & RECH MEDICALE.

PA (PAOL-) INST PAOLI CALMETTES IPC.

XX

PI Bertucci F, Houlgate R, Birnbaum D, Debono S;

XX

DR WPI; 2005-435408/44.

DR PC:NCBI; gi472990.

XX

PT Analyzing differential gene expression associated with histopathologic features of colorectal disease, involves detecting overexpression or underexpression of pool of polynucleotide sequences in colon tissues.

XX

PS Claim 1; SEQ ID NO 831; 154pp; English.

XX

CC The invention describes a method of analyzing (M1) differential gene expression associated with histopathologic features of colorectal disease, comprising detecting overexpression or underexpression of a pool of polynucleotide sequences in colon tissues, the pool selected in each of predefined polynucleotide sequence sets chosen from any one of 644 sequence sets comprising combinations of SEQ ID No. 1-1596, fully defined in the specification. Also described are: a polynucleotide library (I) useful for the molecular characterization of a colon cancer, comprising or corresponding to a pool of polynucleotide sequences either overexpressed or underexpressed in colon tissue, the pool corresponding to all or part of the polynucleotide sequence chosen from PS1; and assigning (M2) a therapeutic regimen to patient with histopathological features of colorectal disease, e.g. colon cancer, comprising classifying the patient having a poor prognosis or a good prognosis on the basis of (M1), assigning the patient a therapeutic regimen, the therapeutic regimen comprising no adjuvant chemotherapy if the patient is lymph node negative and is classified as having a good prognosis or comprising chemotherapy if the patient has any other combination of lymph node status and expression profile. (M1) is useful for analyzing differential gene expression associated with histopathologic features of colorectal disease. (M1) is useful for analyzing differential gene expression associated with colon tumors, visceral metastases in colon cancer, lymph node metastases in colon cancer, MSI phenotype in colon cancer, location of primary colorectal carcinoma, in colon cancer, and survival and death of patient in colon cancer, where the analysis comprises detection of overexpression or underexpression of pool of polynucleotide sequences in colon tissue, the pool corresponding to specific combination of

CC polynucleotide sequences from PS1, as given in the specification. (M1) is
 CC useful for detecting, diagnosing, staging, classifying, monitoring or
 CC predicting conditions associated with colorectal cancer. (M1) is useful
 CC for prognosis or diagnosis or colon cancer or for monitoring the
 CC treatment of a patient with colon cancer, which involves implementing
 CC (M1) on nucleic acids from the patient. (M1) is useful for
 CC differentiating a normal cell from a cancer cell, which involves
 CC implementing (M1) on nucleic acids from the cells. (M1) is useful for
 CC selecting appropriate doses and/or schedule of chemotherapeutics and/or
 CC (bio)pharmaceuticals and/or target agents e.g. Irinotecan, 5-fluorouracil
 CC and methotrexate. This sequence represents a polynucleotide identified in
 CC the analysis of differential gene expression associated with
 CC histopathological features of colorectal disease. Note: The sequence data
 CC for this patent is not represented in the printed specification but is
 CC based on sequence information supplied by the European Patent Office.
 CC

CC Revised record issued on 11-JUN-2007 : Enhanced with precomputed
 CC information from BOND.

XX

SQ Sequence 3424 BP; 1134 A; 618 C; 709 G; 963 T; 0 U; 0 Other;

Query Match 100.0%; Score 3424; DB 4; Length 3424;
 Best Local Similarity 100.0%;
 Matches 3424; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AGGATCAGAACATGCCTCCAAGACCATCATCAGGTGAACGTGGGGCATCCACTTGTATG 60
 |||||||

Db 1 AGGATCAGAACATGCCTCCAAGACCATCATCAGGTGAACGTGGGGCATCCACTTGTATG 60

Qy 61 CCCCAAGAACCTAGTGGATGTTACTACCAAATGGAATGATAGTGACTTTAGAATGC 120
 |||||||

Db 61 CCCCAAGAACCTAGTGGATGTTACTACCAAATGGAATGATAGTGACTTTAGAATGC 120

Qy 121 CCTCGTAGGCTACATTAGTAACATAAACATGAACATTAAAGAAGCAAGAAAATAC 180
 |||||||

Db 121 CCTCGTAGGCTACATTAGTAACATAAACATGAACATTAAAGAAGCAAGAAAATAC 180

Qy 181 CCTCTCCATCAACTTCTCAAGATGAATCTTCTACATTTCTGAAGTGTACCCAGAA 240
 |||||||

Db 181 CCTCTCCATCAACTTCTCAAGATGAATCTTCTACATTTCTGAAGTGTACCCAGAA 240

Qy 241 GCAGAAAGGGAGAATTGGATGAAACAAGACGACTTGTGATCTCGGTTTCAA 300
 |||||||

Db 241 GCAGAAAGGGAGAATTGGATGAAACAAGACGACTTGTGATCTCGGTTTCAA 300

Qy 301 CCATTTTAAAGTAATTGAACCACTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA 360
 |||||||

Db 301 CCATTTTAAAGTAATTGAACCACTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA 360

| | | | |
|----|------|---|------|
| Qy | 361 | ATGGTTTGCTATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTA | 420 |
| | | | |
| Db | 361 | ATGGTTTGCTATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTA | 420 |
| Qy | 421 | CAGGACTCCGAAGAAATATTCTTAATGTTGAAAGAAGCTGTGGATCTTAGGGATCTT | 480 |
| | | | |
| Db | 421 | CAGGACTCCGAAGAAATATTCTTAATGTTGAAAGAAGCTGTGGATCTTAGGGATCTT | 480 |
| Qy | 481 | AATTACACCTCATAGTAGAGCAATGTATGCTATCGCCACATGTAGAACATCTCACAGAG | 540 |
| | | | |
| Db | 481 | AATTACACCTCATAGTAGAGCAATGTATGCTATCGCCACATGTAGAACATCTCACAGAG | 540 |
| Qy | 541 | CTGCCAAAGCACATATATAATAAAATTGGATAGAGGCAAATAATAGTGGTGAATTGGTA | 600 |
| | | | |
| Db | 541 | CTGCCAAAGCACATATATAATAAAATTGGATAGAGGCAAATAATAGTGGTGAATTGGTA | 600 |
| Qy | 601 | ATAGTTCTCAAATAATGACAAGCAGAAGTATACTCTGAAAATCAACCATGACTGTGTG | 660 |
| | | | |
| Db | 601 | ATAGTTCTCAAATAATGACAAGCAGAAGTATACTCTGAAAATCAACCATGACTGTGTG | 660 |
| Qy | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAACTAGAAGTATGTTCTATCATCT | 720 |
| | | | |
| Db | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAACTAGAAGTATGTTCTATCATCT | 720 |
| Qy | 721 | GAACAAATTAAACTCTGTGTTTAGAATATCAGGGCAAGTACATTTAAAAGTGTGGA | 780 |
| | | | |
| Db | 721 | GAACAAATTAAACTCTGTGTTTAGAATATCAGGGCAAGTACATTTAAAAGTGTGGA | 780 |
| Qy | 781 | TGTGATGAATACTTCCTAGAAAATATCCTCTGAGTCAGTATAAGTATAAGAACGCTGT | 840 |
| | | | |
| Db | 781 | TGTGATGAATACTTCCTAGAAAATATCCTCTGAGTCAGTATAAGTATAAGAACGCTGT | 840 |
| Qy | 841 | ATAATGCTGGGAGGATGCCAATTGAAGATGATGGCTAAAGAAAGCCTTATTCTCAA | 900 |
| | | | |
| Db | 841 | ATAATGCTGGGAGGATGCCAATTGAAGATGATGGCTAAAGAAAGCCTTATTCTCAA | 900 |
| Qy | 901 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 960 |
| | | | |
| Db | 901 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 960 |
| Qy | 961 | TATATGAATGGAGAACATCTACAAAATCCCTTGGGTATAATAGAGCACTCAGAATA | 1020 |
| | | | |
| Db | 961 | TATATGAATGGAGAACATCTACAAAATCCCTTGGGTATAATAGAGCACTCAGAATA | 1020 |
| Qy | 1021 | AAAATTCTTGTGCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTGTGTT | 1080 |
| | | | |
| Db | 1021 | AAAATTCTTGTGCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTGTGTT | 1080 |
| Qy | 1081 | CGAACAGGTATCTACCAGGAGAACCTTATGTGACAATGTGAAACACTCAAAGAGTA | 1140 |

| | | | |
|----|------|--|------|
| Db | 1081 | CGAACAGGTATCTACCATGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1140 |
| Qy | 1141 | CCTTGTTCATCCAGTGGAAATGAATGGCTGAATTATGATATACATTCTGTACCTTT | 1200 |
| Db | 1141 | CCTTGTTCATCCAGTGGAAATGAATGGCTGAATTATGATATACATTCTGTACCTTT | 1200 |
| Qy | 1201 | CCTCGTGCTGCTGACTTGCCTTCCATTGCTCTGTTAAAGGCCGAAAGGGTGTAAA | 1260 |
| Db | 1201 | CCTCGTGCTGCTGACTTGCCTTCCATTGCTCTGTTAAAGGCCGAAAGGGTGTAAA | 1260 |
| Qy | 1261 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTA | 1320 |
| Db | 1261 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTA | 1320 |
| Qy | 1321 | GTATCTGGAAAAATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| Db | 1321 | GTATCTGGAAAAATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| Qy | 1381 | AACCCTATTGGTGTACTGGATCAAATCCAATAAAGAAACTCCATGCTTAGAGTTGGAG | 1440 |
| Db | 1381 | AACCCTATTGGTGTACTGGATCAAATCCAATAAAGAAACTCCATGCTTAGAGTTGGAG | 1440 |
| Qy | 1441 | TTTGACTGGTCAGCAGTGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |
| Db | 1441 | TTTGACTGGTCAGCAGTGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |
| Qy | 1501 | AATTGGTCTGTATCCCGAGAACAGCAGGATTAGCTATTCCCACGCAGGACTGAGAACAGA | 1560 |
| Db | 1501 | AATTGGTCTGTATCCCGAGAACAGCAGGATTAGCTATTCCCACGCAGGACTGAGAACAGA | 1560 |
| Qy | 1561 | CTAGCTAGAGACAATGAATTAGGGAAATGACAAAGAACAGCTAAAGCAATTCTACA | 1620 |
| Db | 1561 | CTAGCTAGAGACAATGAATTAGGGAAATGACAAAGAACAGCTAAAGCAATTCTACA | 1620 |
| Qy | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAGATTCTATGGAGTCACAGACAC | 1680 |
| Db | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAGATTCTATGGAGTCACAGACAC | 1680 |
| Qy | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGCTGTAAATGGAATTCT | 1740 |
| Db | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGCTGTAAATGGAATTCT | 1740 |
| Qy | 1741 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAGATTGGCCTCAAACACTGAA | 1800 |
| Db | 1741 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAGATTGGCCTCAAACACTGAA | 1800 |
| Qy | 1801 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCTATGGTCGAGGTTTGCTGTT | 1860 |
| | | | |

| | | | |
|----|------|--|------|
| Db | 1801 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCCTATGGTCGAGGTTTGCTGTT | 1860 |
| Qy | 1861 | CGGTGCTTGGAAAAATATTAACAGATGACAAACTTCTCAGTATTAATTCACTGCTAGTA | 1920 |
| Db | 1861 | | 1920 |
| Qy | 1921 | CAGGTCTAAATATGAACAATATTGGATAACTGCTGTGAGATTTACTGAAGAAA | 1980 |
| Db | 1921 | | 1980 |
| Qy | 1981 | GCATTGACTAATCAAAGGATGGGCACTTTCTTTGGCATTAAAATCTGAGATGCAC | 2040 |
| Db | 1981 | | 2040 |
| Qy | 2041 | AATAAACAGTTAGCCAGAGGTTGGCTGCTTTGGAGTCCTATTGCGTGCATGTGGG | 2100 |
| Db | 2041 | | 2100 |
| Qy | 2101 | ATGTATTGAAAGCACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTCATTAACCTAACT | 2160 |
| Db | 2101 | | 2160 |
| Qy | 2161 | GACATTCTCAACAGGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTT | 2220 |
| Db | 2161 | | 2220 |
| Qy | 2221 | GAGCAAATGAGGCGACCAGATTCTAGGGATGCCATACAGGGCTGCTGCTCCTCTAAAC | 2280 |
| Db | 2221 | | 2280 |
| Qy | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTAAAGAGTGTGCAATTATGCTCTGCAAAA | 2340 |
| Db | 2281 | | 2340 |
| Qy | 2341 | AGGCCACTGTGGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTAGAAC | 2400 |
| Db | 2341 | | 2400 |
| Qy | 2401 | AATGAGATCATTTAAAATGGGATGATTACGGCAAGATATGCTAACACTCAAATT | 2460 |
| Db | 2401 | | 2460 |
| Qy | 2461 | ATTCGTATTATGGAAAATATCTGGAAACATCAAGGTCTGATCTCGAATGTTACCTTAT | 2520 |
| Db | 2461 | | 2520 |
| Qy | 2521 | GGTTGTCTGTCATCGGTGACTGTGTGGACTTATTGAGGTGGTGCAGAAATTCTCACACT | 2580 |
| Db | 2521 | | 2580 |

| | | | |
|----|------|--|------|
| Qy | 2581 | ATTATGCAAATTCACTGCAAAGCGGTTGAAAGGTGCACTGCAGTCAACAGCCACACA | 2640 |
| Db | 2581 | | |
| Qy | 2641 | CTACATCAGTGGCTCAAAGACAAGAACAAAGGAGAAATATATGATGCAGCCATTGACCTG | 2700 |
| Db | 2641 | | |
| Qy | 2701 | TTTACACGTTCATGTGCTGGACTGTGAGCTACCTTCATTTGGAAATTGGAGATCGT | 2760 |
| Db | 2701 | | |
| Qy | 2761 | CACAATAGTAACATCATGGTGAAGACGATGGACAACGTGTTCATATAGATTTGGACAC | 2820 |
| Db | 2761 | | |
| Qy | 2821 | TTTTGGATACAAGAAGAAAAATTGGTTATAACGAGAACGTGTGCCATTGTTTG | 2880 |
| Db | 2821 | | |
| Qy | 2881 | ACACAGGATTCTTAATAGTGTGATTAAAGGAGGCCAAGAACATGCACAAAGACAAGAGAA | 2940 |
| Db | 2881 | | |
| Qy | 2941 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACAGCATGCCAAT | 3000 |
| Db | 2941 | | |
| Qy | 3001 | CTCTTCATAAAATCTTCTCAATGATGCTTGGCTCTGGAATGCCAGAACTACAATCTTT | 3060 |
| Db | 3001 | | |
| Qy | 3061 | GATGACATTGCATACATTGAAAGACCCTAGCCTTAGATAAAACTGAGCAAGAGGCTTG | 3120 |
| Db | 3061 | | |
| Qy | 3121 | GAGTATTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT | 3180 |
| Db | 3121 | | |
| Qy | 3181 | TGGATCTCCACACAATTAAACAGCATGCATTGAACTGAAAGATAACTGAGAAAATGAAA | 3240 |
| Db | 3181 | | |
| Qy | 3241 | GCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGAAAGACCGATTGCA | 3300 |
| Db | 3241 | | |

Qy 3301 TAGGAATTGCACAATCCATGAACAGCATTAGATTACAGCAAGAACAGAAATAAAATACT 3360
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 3301 TAGGAATTGCACAATCCATGAACAGCATTAGATTACAGCAAGAACAGAAATAAAATACT 3360

Qy 3361 ATATAATTAAATAATGTAAACGCAAACAGGGTTGATAGCACTTAAACTAGTTCATTC 3420
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 3361 ATATAATTAAATAATGTAAACGCAAACAGGGTTGATAGCACTTAAACTAGTTCATTC 3420

Qy 3421 AAAA 3424
 ||||
 Db 3421 AAAA 3424

RESULT 6

AED31618

ID AED31618 standard; cDNA; 3424 BP.

XX

AC AED31618;

XX

DT 15-DEC-2005 (first entry)

XX

DE cDNA (SEQ ID No:2) encoding human phosphatidylinositol 3-kinase (PIK3CA).

XX

KW cancer; neoplasm; phosphatidylinositol 3-kinase; PIK3CA; tumor;

KW chemotherapy; cytostatic; RNA interference; gene silencing;

KW antisense therapy; gene; ss.

XX

OS Homo sapiens.

XX

FH Key Location/Qualifiers

FT CDS 13..3219

FT /*tag= a

FT /product= "PIK3CA"

XX

PN WO2005091849-A2.

XX

PD 06-OCT-2005.

XX

PF 18-FEB-2005; 2005WO-US005193.

XX

PR 02-MAR-2004; 2004US-0548886P.

XX

PA (UYJO) UNIV JOHNS HOPKINS.

XX

PI Samuels Y, Velculescu V, Kinzler KW, Vogelstein B;

XX

DR WPI; 2005-713721/73.

DR P-PSDB; AED31619.

XX

PT Assessing cancer in a human suspected of having cancer, by determining a non-synonymous, intragenic mutation in a phosphatidylinositol 3-kinase (PTK3CA) coding sequence in the body sample from a human.

v

PS Claim 1: SEQ ID NO 2: 107pp; English

Y

The invention relates to a method of assessing cancer in a body sample of a human suspected of having cancer. The method comprises determining a non-synonymous, intragenic mutation in a phosphatidylinositol 3-kinase (PIK3CA) coding sequence in the body sample, and identifying the human as likely to have cancer if a non-synonymous, intragenic mutation in PIK3CA coding sequence is determined in the body sample. Also described are: (1) a method of inhibiting progression of a tumor in a human; (2) a method of identifying candidate chemotherapeutic agents; (3) a method for delivering an appropriate chemotherapeutic drug to a patient in need; and (4) a set of one or more primers for amplifying and/or sequencing PIK3CA, the primers selected from forward primers, reverse primers, or sequencing primers, where the forward primers are selected from sequences given as SEQ ID NOS 6-165, the reverse primers are selected from sequences given as SEQ ID NOS 166-325, and the sequencing primers are selected sequences given as SEQ ID NOS 326-485 in the specification. The method of the invention is useful for assessing cancer in a body sample of a human suspected of having cancer, inhibiting progression of a tumor in a human, identifying candidate chemotherapeutic agents, and delivering an appropriate chemotherapeutic drug to a patient in need. This sequence encodes human PIK3CA.

xv

so Sequence 3424 BP: 1134 A; 618 C; 709 G; 963 T; 0 U; 0 Other;

Query Match 100.0%; Score 3424; DB 4; Length 3424;
Best Local Similarity 100.0%;
Matches 3424; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Q

1 AGGATCAGAACATGCCTCAAGACCATCATCAGGTGAACGTGGGCATCCACTTGATG 60

10

1 AGGATCAGAACATGCCAAGACCATCATCAGGTGAACCTGTGGGGCATCCACTTGATG 60

Q-

61 CCCCCAAGAACCTAGTGGATGTTACTACCAATGGAATGATAGTGACTTTAGAATGC 120
.....

11

61 CCCCCAAGAATCCTAGTGGAAATGTTACTACCAAATGGAATGATACTGTGACTTTAGAATGC 120

9

121 CTCCGTGAGGCTACATTAGTAACATAAAGCATGAACATTAAAGAAGCAAGAAAATAC 180

R1

121 CTCCGTAGGGCTACATTAGTAACATAAAGCATGAACATTAAAGAACGAAAGAAAATAC 180

Q

181 CCTCTCCATCAACTTCTTCAAGATGAATCTTACATTTCGTAAGTGTACCCAAGAA 240

51

181 CCTCTCCATCAACTCTTCAAGATGAATCTTCTTACATTTCGTAAGTGTACCCAAGAA 240

| | | |
|----|-----|--|
| Qy | 241 | GCAGAAAGGGAGAATTGATGAAACAAGACGACTTGTGATCTCGGTTTC 300 |
| Db | 241 | GCAGAAAGGGAGAATTGATGAAACAAGACGACTTGTGATCTCGGTTTC 300 |
| Qy | 301 | CCATTTAAAAGTAATTGACCAGTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA 360 |
| Db | 301 | CCATTTAAAAGTAATTGACCAGTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA 360 |
| Qy | 361 | ATGGTTTGCTATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTA 420 |
| Db | 361 | ATGGTTTGCTATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTA 420 |
| Qy | 421 | CAGGACTCCGAAGAAATATTCTTAATGTTGTAAGAACGCTGTGGATCTTAGGGATCTT 480 |
| Db | 421 | CAGGACTCCGAAGAAATATTCTTAATGTTGTAAGAACGCTGTGGATCTTAGGGATCTT 480 |
| Qy | 481 | AATTACACCTCATAGTAGAGCAATGTATGCTATCGCCACATGAGAACATCTCACCAAGAG 540 |
| Db | 481 | AATTACACCTCATAGTAGAGCAATGTATGCTATCGCCACATGAGAACATCTCACCAAGAG 540 |
| Qy | 541 | CTGCCAAAGCACATATATAATAAAATTGGATAGAGGCCAATAATAGTGGTGAATTGGTA 600 |
| Db | 541 | CTGCCAAAGCACATATATAATAAAATTGGATAGAGGCCAATAATAGTGGTGAATTGGTA 600 |
| Qy | 601 | ATAGTTCTCAAATAATGACAAGCAGAAGTATACTCTGAAAATCAACCATGACTGTG 660 |
| Db | 601 | ATAGTTCTCAAATAATGACAAGCAGAAGTATACTCTGAAAATCAACCATGACTGTG 660 |
| Qy | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTGCTATCATCT 720 |
| Db | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTGCTATCATCT 720 |
| Qy | 721 | GAACAATTAAACTCTGTGTTTAGAATATCAGGGCAAGTACATTTAAAAGTGTGGA 780 |
| Db | 721 | GAACAATTAAACTCTGTGTTTAGAATATCAGGGCAAGTACATTTAAAAGTGTGGA 780 |
| Qy | 781 | TGTGATGAATACTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATATAAGAACGCTGT 840 |
| Db | 781 | TGTGATGAATACTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATATAAGAACGCTGT 840 |
| Qy | 841 | ATAATGCTGGGAGGATGCCAATTGAAGATGATGGCTAAAGAACGCTTTATTCTCAA 900 |
| Db | 841 | ATAATGCTGGGAGGATGCCAATTGAAGATGATGGCTAAAGAACGCTTTATTCTCAA 900 |
| Qy | 901 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA 960 |
| Db | 901 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA 960 |
| Qy | 961 | TATATGAATGGAGAAACATCTACAAAATCCCTTGGGTATAATAGAGCACTCAGAATA 1020 |

| | | | |
|----|------|--|------|
| Db | 961 | TATATGAATGGAGAACATCTACAAAATCCCTTGGGTATAAATAGAGCACTCAGAATA | 1020 |
| Qy | 1021 | AAAATTCTTGTGCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTATGTT | 1080 |
| Db | 1021 | AAAATTCTTGTGCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTATGTT | 1080 |
| Qy | 1081 | CGAACAGGTATCTACCATGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1140 |
| Db | 1081 | CGAACAGGTATCTACCATGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1140 |
| Qy | 1141 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATACATTCTGATCTT | 1200 |
| Db | 1141 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATACATTCTGATCTT | 1200 |
| Qy | 1201 | CCTCGTGTGCTCGACTTGCCTTCCATTGCTCTGTTAAAGGCCGAAAGGGTGTAAA | 1260 |
| Db | 1201 | CCTCGTGTGCTCGACTTGCCTTCCATTGCTCTGTTAAAGGCCGAAAGGGTGTAAA | 1260 |
| Qy | 1261 | GAGGAACACTGTCCATTGGCATGGGAATATAAACTTGTGATTACACAGACACTCTA | 1320 |
| Db | 1261 | GAGGAACACTGTCCATTGGCATGGGAATATAAACTTGTGATTACACAGACACTCTA | 1320 |
| Qy | 1321 | GTATCTGGAAAAATGGCTTGAATCTTGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| Db | 1321 | GTATCTGGAAAAATGGCTTGAATCTTGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| Qy | 1381 | AACCCTATTGGTGTACTGGATCAAATCCAATAAAGAAACTCCATGCTTAGAGTGGAG | 1440 |
| Db | 1381 | AACCCTATTGGTGTACTGGATCAAATCCAATAAAGAAACTCCATGCTTAGAGTGGAG | 1440 |
| Qy | 1441 | TTGACTGGTCAGCAGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |
| Db | 1441 | TTGACTGGTCAGCAGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |
| Qy | 1501 | AATTGGTCTGTATCCCGAGAACAGCAGGATTAGCTATTCCCACGCAGGACTGAGAACAGA | 1560 |
| Db | 1501 | AATTGGTCTGTATCCCGAGAACAGCAGGATTAGCTATTCCCACGCAGGACTGAGAACAGA | 1560 |
| Qy | 1561 | CTAGCTAGAGACAATGAATTAGGGAAAATGACAAAGAACAGCTAAAGCAATTCTACA | 1620 |
| Db | 1561 | CTAGCTAGAGACAATGAATTAGGGAAAATGACAAAGAACAGCTAAAGCAATTCTACA | 1620 |
| Qy | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAACAGATTTCATGGAGTCACAGACAC | 1680 |
| Db | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAACAGATTTCATGGAGTCACAGACAC | 1680 |
| Qy | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGCTGTAAATGGAATTCT | 1740 |
| | | | |

| | | | |
|----|------|--|------|
| Db | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGTCGTAAATGGAATTCT | 1740 |
| Qy | 1741 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAAGATTGGCCTCCAATCAAACCTGAA | 1800 |
| Db | 1741 | | |
| Db | 1741 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAAGATTGGCCTCCAATCAAACCTGAA | 1800 |
| Qy | 1801 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCCATGGTCGAGGTTTGCTGTT | 1860 |
| Db | 1801 | | |
| Db | 1801 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCCATGGTCGAGGTTTGCTGTT | 1860 |
| Qy | 1861 | CGGTGCTTGGAAAAAATATTAACAGATGACAAACTTCTCAGTATTTAACAGCTAGTA | 1920 |
| Db | 1861 | | |
| Db | 1861 | CGGTGCTTGGAAAAAATATTAACAGATGACAAACTTCTCAGTATTTAACAGCTAGTA | 1920 |
| Qy | 1921 | CAGGTCTAAATATGAACAAATTGGATAACTTGCTTGTGAGATTTACTGAAGAAA | 1980 |
| Db | 1921 | | |
| Db | 1921 | CAGGTCTAAATATGAACAAATTGGATAACTTGCTTGTGAGATTTACTGAAGAAA | 1980 |
| Qy | 1981 | GCATTGACTAACTCAAAGGATGGGCACTTTTCTTTGGCATTAAAATCTGAGATGCAC | 2040 |
| Db | 1981 | | |
| Db | 1981 | GCATTGACTAACTCAAAGGATGGGCACTTTTCTTTGGCATTAAAATCTGAGATGCAC | 2040 |
| Qy | 2041 | AATAAAACAGTTAGCCAGAGGTTGGCCTGCTTTGGAGTCCTATTGCGTCATGTGGG | 2100 |
| Db | 2041 | | |
| Db | 2041 | AATAAAACAGTTAGCCAGAGGTTGGCCTGCTTTGGAGTCCTATTGCGTCATGTGGG | 2100 |
| Qy | 2101 | ATGTATTGAAAGCACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTCATTAACCTAACT | 2160 |
| Db | 2101 | | |
| Db | 2101 | ATGTATTGAAAGCACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTCATTAACCTAACT | 2160 |
| Qy | 2161 | GACATTCTAAACAGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTT | 2220 |
| Db | 2161 | | |
| Db | 2161 | GACATTCTAAACAGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTT | 2220 |
| Qy | 2221 | GAGCAAATGAGGCGACCAGATTCTAGGGATGCCCTACAGGGCTGCTGTCCTCTAAAC | 2280 |
| Db | 2221 | | |
| Db | 2221 | GAGCAAATGAGGCGACCAGATTCTAGGGATGCCCTACAGGGCTGCTGTCCTCTAAAC | 2280 |
| Qy | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTAAAGAGTGTGCAATTATGCTTCTGCAAAA | 2340 |
| Db | 2281 | | |
| Db | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTAAAGAGTGTGCAATTATGCTTCTGCAAAA | 2340 |
| Qy | 2341 | AGGCCACTGTGGTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTAGAAC | 2400 |
| Db | 2341 | | |
| Db | 2341 | AGGCCACTGTGGTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTAGAAC | 2400 |
| Qy | 2401 | AATGAGATCATTTAAAAATGGGATGATTACGGCAAGATATGCTAACACTCAAATT | 2460 |
| Db | 2401 | | |
| Db | 2401 | AATGAGATCATTTAAAAATGGGATGATTACGGCAAGATATGCTAACACTCAAATT | 2460 |

| | | | |
|----|------|--|------|
| Qy | 2461 | ATTCGTATTATGGAAAATATCTGGAAATCAAGGTCTGATCTCGAATGTTACCTTAT | 2520 |
| Db | 2461 | | 2520 |
| Qy | 2521 | GGTTGTCTGTCAATCGGTGACTGTGTTGGACTTATTGAGGTGGTGCAGAATTCTCACACT | 2580 |
| Db | 2521 | | 2580 |
| Qy | 2581 | ATTATGCAAATTCACTGCAAAGGCCGTTGAAAGGTGCACTGCAGTTAACAGCCACACA | 2640 |
| Db | 2581 | | 2640 |
| Qy | 2641 | CTACATCAGTGGCTCAAAGACAAGAACAAAGGAGAAATATGATGCAGCCATTGACCTG | 2700 |
| Db | 2641 | | 2700 |
| Qy | 2701 | TTTACACGTTCATGTGCTGGATACTGTGAGCTACCTTCATTTGGAAATTGGAGATCGT | 2760 |
| Db | 2701 | | 2760 |
| Qy | 2761 | CACAATAGTAACATCATGGTAAAGACGATGGACAACGTGTTCATATAGATTGGACAC | 2820 |
| Db | 2761 | | 2820 |
| Qy | 2821 | TTTTGGATCACAAGAAGAAAAATTGGTATACGAGAACGTGTGCCATTGTTTG | 2880 |
| Db | 2821 | | 2880 |
| Qy | 2881 | ACACAGGATTCTTAATAGTGAATTAGTAAAGGAGGCCAAGAACATGCACAAAGACAAGAGAA | 2940 |
| Db | 2881 | | 2940 |
| Qy | 2941 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACAGCATGCCAAT | 3000 |
| Db | 2941 | | 3000 |
| Qy | 3001 | CTCTTCATAAAATCTTCTCAATGATGCTGGCTCTGGAAATGCCAGAACTACAATCTTT | 3060 |
| Db | 3001 | | 3060 |
| Qy | 3061 | GATGACATTGCATACATCGAAAGACCCTAGCCTTAGATAAAACTGAGCAAGAGGCTTG | 3120 |
| Db | 3061 | | 3120 |
| Qy | 3121 | GAGTATTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT | 3180 |
| Db | 3121 | | 3180 |

Qy 3181 TGGATCTTCCACACAATTAAACAGCATGCATTGAACTGAAAGATAACTGAGAAAATGAAA 3240
 |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 3181 TGGATCTTCCACACAATTAAACAGCATGCATTGAACTGAAAGATAACTGAGAAAATGAAA 3240

Qy 3241 GCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGAAAGACCGATTGCA 3300
 |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 3241 GCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGAAAGACCGATTGCA 3300

Qy 3301 TAGGAATTGCACAATCCATGAACAGCATTAGATTACAGCAAGAACAGAAATAAAATACT 3360
 |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 3301 TAGGAATTGCACAATCCATGAACAGCATTAGATTACAGCAAGAACAGAAATAAAATACT 3360

Qy 3361 ATATAATTAAATAATGTAAACGCACAGGGTTGATAGCACTTAAACTAGTTCATTT 3420
 |||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 3361 ATATAATTAAATAATGTAAACGCACAGGGTTGATAGCACTTAAACTAGTTCATTT 3420

Qy 3421 AAAA 3424
 |||||
 Db 3421 AAAA 3424

RESULT 7

AEG93388

ID AEG93388 standard; cDNA; 3424 BP.

XX

AC AEG93388;

XX

DT 11-JUN-2007 (revised)

DT 01-JUN-2006 (first entry)

XX

DE Human tumor cell cDNA SEQ ID NO:884.

XX

KW Gene expression; tumor; ss.

XX

OS Homo sapiens.

XX

PN WO2006036025-A1.

XX

PD 06-APR-2006.

XX

PF 30-SEP-2005; 2005WO-JP018574.

XX

PR 30-SEP-2004; 2004JP-00286259.

PR 28-FEB-2005; 2005JP-00054475.

PR 28-FEB-2005; 2005JP-00054866.

XX

PA (EISA) EISAI CO LTD.

XX

PI Owa T, Yokoi A, Ozawa Y, Kawai T, Ushijima R;

XX

DR WPI; 2006-293404/30.

DR PC:NCBI; gi472990.

DR PC_ENCPRO:NCBI; gi472991.

XX

PT Evaluating sensitivity of a tumor cell to a sulfonamide-containing compound, comprises comparing the expression of specific genes in tumor cells before and after administration of the compound.

XX

PS Claim 1; SEQ ID NO 884; 1405pp; Japanese.

XX

CC The invention relates to a method of evaluating the sensitivity of a tumor cell to a sulfonamide-containing compound, by comparing the expression level of genes in tumor cells obtained from cancer patients before and after administration of the sulfonamide-containing compound and determining the tumor cell to be sensitive to the sulfonamide-containing compound, when the expression amount of genes in the cell is increased compared with the expression amount before administration and/or when the expression amount of one or more genes is decreased compared with the expression amount before administration. The invention also relates to an assay reagent of RNA comprising an oligonucleotide complementary to an RNA which is the transcription product of a gene, and an immunoassay reagent containing the antibody with respect to a protein which is a translation product of the gene. The expression level of the gene, which is the RNA transcription product, is measured using a DNA microarray or by quantitative PCR. The expression level of protein, which is a translation product of the gene, is measured by an immunochemical method such as enzyme linked immunosorbent assay (ELISA), radioimmunoassay (RIA) or Western blotting. The method enables evaluation of the sensitivity of a tumor cell to a sulfonamide-containing compound. This sequence represents human tumor cell cDNA used in the scope of the invention.

CC

CC Revised record issued on 11-JUN-2007 : Enhanced with precomputed information from BOND.

XX

SQ Sequence 3424 BP; 1134 A; 618 C; 709 G; 963 T; 0 U; 0 Other;

| | | | | | | | | | |
|-----------------------|--------|--------------|------|------------|---|--------|------|------|---|
| Query Match | 100.0% | Score | 3424 | DB | 4 | Length | 3424 | | |
| Best Local Similarity | 100.0% | | | | | | | | |
| Matches | 3424 | Conservative | 0 | Mismatches | 0 | Indels | 0 | Gaps | 0 |

Qy

| | | | |
|---|---|-------------------------|----|
| 1 | AGGATCAGAACAAATGCCTCCAAGACCATCATCAGGTGA | ACTGTGGGGCATCCACTTGTATG | 60 |
| | | | |

Db

| | | | | |
|---|---------------|---------------------------|-------------------------|----|
| 1 | AGGATCAGAACAA | TGCCTCCAAGACCATCATCAGGTGA | ACTGTGGGGCATCCACTTGTATG | 60 |
|---|---------------|---------------------------|-------------------------|----|

Qy

| | | | |
|----|------------------------------------|-----------------------|-----|
| 61 | CCCCAAGAACCTAGTGGATGTTACTACCAATGGA | ATGATAGTGACTTTAGAATGC | 120 |
| | | | |

Db

| | | | |
|----|------------------------------------|-----------------------|-----|
| 61 | CCCCAAGAACCTAGTGGATGTTACTACCAATGGA | ATGATAGTGACTTTAGAATGC | 120 |
|----|------------------------------------|-----------------------|-----|

| | | | |
|----|-----|--|-----|
| Qy | 121 | CTCCGTGAGGCATACATTAGTAACATAAAGCATGAACATTAAAGAAGCAAGAAAATAC | 180 |
| | | | |
| Db | 121 | CTCCGTGAGGCATACATTAGTAACATAAAGCATGAACATTAAAGAAGCAAGAAAATAC | 180 |
| Qy | 181 | CCTCTCCATCAACTTCTCAAGATGAATCTTCTACATTTCTGAAGTGTACCCAAGAA | 240 |
| | | | |
| Db | 181 | CCTCTCCATCAACTTCTCAAGATGAATCTTCTACATTTCTGAAGTGTACCCAAGAA | 240 |
| Qy | 241 | GCAGAAAGGGAGAATTTTGATGAAACAAGACGACTTGTGATCTCGGTTTTCAA | 300 |
| | | | |
| Db | 241 | GCAGAAAGGGAGAATTTTGATGAAACAAGACGACTTGTGATCTCGGTTTTCAA | 300 |
| Qy | 301 | CCATTTTAAAGTAATTGAACCACTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA | 360 |
| | | | |
| Db | 301 | CCATTTTAAAGTAATTGAACCACTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA | 360 |
| Qy | 361 | ATGGTTTGCATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTA | 420 |
| | | | |
| Db | 361 | ATGGTTTGCATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTA | 420 |
| Qy | 421 | CAGGACTTCCGAAGAAATATTCTTAATGTTGTAAGAAGCTGTGGATCTTAGGGATCTT | 480 |
| | | | |
| Db | 421 | CAGGACTTCCGAAGAAATATTCTTAATGTTGTAAGAAGCTGTGGATCTTAGGGATCTT | 480 |
| Qy | 481 | AATTCACCTCATAGTAGAGCAATGTATGTCATCCGCCACATGTAGAACATCTCACCAGAG | 540 |
| | | | |
| Db | 481 | AATTCACCTCATAGTAGAGCAATGTATGTCATCCGCCACATGTAGAACATCTCACCAGAG | 540 |
| Qy | 541 | CTGCCAAGCACATATATAATAAAATTGGATAGAGGCCAATAATAGTGGTGAATTGGTA | 600 |
| | | | |
| Db | 541 | CTGCCAAGCACATATATAATAAAATTGGATAGAGGCCAATAATAGTGGTGAATTGGTA | 600 |
| Qy | 601 | ATAGTTCTCAAATAATGACAAGCAGAAAGTATACTCTGAAAATCAACCAGTACTGTG | 660 |
| | | | |
| Db | 601 | ATAGTTCTCAAATAATGACAAGCAGAAAGTATACTCTGAAAATCAACCAGTACTGTG | 660 |
| Qy | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTCTATCATCT | 720 |
| | | | |
| Db | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTCTATCATCT | 720 |
| Qy | 721 | GAACAATTAAACTCTGTGTTTAGAATATCAGGGCAAGTACATTAAAGTGTGTGGA | 780 |
| | | | |
| Db | 721 | GAACAATTAAACTCTGTGTTTAGAATATCAGGGCAAGTACATTAAAGTGTGTGGA | 780 |
| Qy | 781 | TGTGATGAATACCTCCTAGAAAAATACCTCTGAGTCAGTATAAGTATATAAGAACGTGT | 840 |
| | | | |
| Db | 781 | TGTGATGAATACCTCCTAGAAAAATACCTCTGAGTCAGTATAAGTATATAAGAACGTGT | 840 |

| | | | |
|----|------|---|------|
| Qy | 841 | ATAATGCTGGGAGGATGCCAATTGAAGATGATGGCTAAAGAAAGCCTTATTCTAA | 900 |
| | | | |
| Db | 841 | ATAATGCTGGGAGGATGCCAATTGAAGATGATGGCTAAAGAAAGCCTTATTCTAA | 900 |
| Qy | 901 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 960 |
| | | | |
| Db | 901 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 960 |
| Qy | 961 | TATATGAATGGAGAACATCTACAAAATCCCTTGGGTATAAATAGAGCACTCAGAATA | 1020 |
| | | | |
| Db | 961 | TATATGAATGGAGAACATCTACAAAATCCCTTGGGTATAAATAGAGCACTCAGAATA | 1020 |
| Qy | 1021 | AAAATTCTTGCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTATGTT | 1080 |
| | | | |
| Db | 1021 | AAAATTCTTGCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTATGTT | 1080 |
| Qy | 1081 | CGAACAGGTATCTACCATTGGAGGAGAACCTTATGTGACAATGTGAAACACTCAAAGAGTA | 1140 |
| | | | |
| Db | 1081 | CGAACAGGTATCTACCATTGGAGGAGAACCTTATGTGACAATGTGAAACACTCAAAGAGTA | 1140 |
| Qy | 1141 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATACATTCTGATCTT | 1200 |
| | | | |
| Db | 1141 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATACATTCTGATCTT | 1200 |
| Qy | 1201 | CCTCGTGTGCTCGACTTGCCTTCCATTGCTCTGTTAAAGGCCGAAAGGGTGTAAA | 1260 |
| | | | |
| Db | 1201 | CCTCGTGTGCTCGACTTGCCTTCCATTGCTCTGTTAAAGGCCGAAAGGGTGTAAA | 1260 |
| Qy | 1261 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTA | 1320 |
| | | | |
| Db | 1261 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTA | 1320 |
| Qy | 1321 | GTATCTGGAAAATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| | | | |
| Db | 1321 | GTATCTGGAAAATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| Qy | 1381 | AACCCTATTGGTGTACTGGATCAAATCAAATAAGAAACTCCATGCTTAGAGTTGGAG | 1440 |
| | | | |
| Db | 1381 | AACCCTATTGGTGTACTGGATCAAATCAAATAAGAAACTCCATGCTTAGAGTTGGAG | 1440 |
| Qy | 1441 | TTGACTGGTCAGCAGTGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |
| | | | |
| Db | 1441 | TTGACTGGTCAGCAGTGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |
| Qy | 1501 | AATTGGTCTGTATCCCGAGAACAGCAGGATTAGCTATTCCCACGCAGGACTGAGTAACAGA | 1560 |
| | | | |
| Db | 1501 | AATTGGTCTGTATCCCGAGAACAGCAGGATTAGCTATTCCCACGCAGGACTGAGTAACAGA | 1560 |
| Qy | 1561 | CTAGCTAGAGACAATGAATTAGGGAAAATGACAAAGAACAGCTAAAGCAATTCTACA | 1620 |

| | | | |
|----|------|---|------|
| Db | 1561 | CTAGCTAGAGACAATGAATTAGGGAAATGACAAAGAACAGCTCAAAGCAATTCTACA | 1620 |
| Qy | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAGATTTCTATGGAGTCACAGACAC | 1680 |
| Db | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAGATTTCTATGGAGTCACAGACAC | 1680 |
| Qy | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGCTGTAAATGGAATTCT | 1740 |
| Db | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGCTGTAAATGGAATTCT | 1740 |
| Qy | 1741 | AGAGATGAACTAGCCCAGATGTATTGCTTGGTAAAAGATTGCCCTCAATCAAACCTGAA | 1800 |
| Db | 1741 | AGAGATGAACTAGCCCAGATGTATTGCTTGGTAAAAGATTGCCCTCAATCAAACCTGAA | 1800 |
| Qy | 1801 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCCTATGGTCGAGGTTTGCTGTT | 1860 |
| Db | 1801 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCCTATGGTCGAGGTTTGCTGTT | 1860 |
| Qy | 1861 | CGGTGCTTGGAAAAAATATTAACAGATGACAAACTTCTCAGTATTAACTCAGTAGTA | 1920 |
| Db | 1861 | CGGTGCTTGGAAAAAATATTAACAGATGACAAACTTCTCAGTATTAACTCAGTAGTA | 1920 |
| Qy | 1921 | CAGGTCTAAACATATGAACAAATATTGGATAACTTGCTGTGAGATTTACTGAAGAAA | 1980 |
| Db | 1921 | CAGGTCTAAACATATGAACAAATATTGGATAACTTGCTGTGAGATTTACTGAAGAAA | 1980 |
| Qy | 1981 | GCATTGACTAACAGGATGGGCACTTTCTTTGGCATTAAAATCTGAGATGCAC | 2040 |
| Db | 1981 | GCATTGACTAACAGGATGGGCACTTTCTTTGGCATTAAAATCTGAGATGCAC | 2040 |
| Qy | 2041 | AATAAAACAGTTAGCCAGAGGTTGGCCTGCTTGGAGTCCTATTGCGATGAGGG | 2100 |
| Db | 2041 | AATAAAACAGTTAGCCAGAGGTTGGCCTGCTTGGAGTCCTATTGCGATGAGGG | 2100 |
| Qy | 2101 | ATGTATTGAAAGCACCTGAATAGGCAAGTCGAGGAATGGAAAAGCTCATTAACCTA | 2160 |
| Db | 2101 | ATGTATTGAAAGCACCTGAATAGGCAAGTCGAGGAATGGAAAAGCTCATTAACCTA | 2160 |
| Qy | 2161 | GACATTCTAAACAGGAGAGGAAGGATGAAACACAAAGGTACAGATGAAGTTTAGTT | 2220 |
| Db | 2161 | GACATTCTAAACAGGAGAGGAAGGATGAAACACAAAGGTACAGATGAAGTTTAGTT | 2220 |
| Qy | 2221 | GAGCAAATGAGGGCACCAGATTCTAGGATGCCCTACAGGGCTGCTGTCTCTCTAAAC | 2280 |
| Db | 2221 | GAGCAAATGAGGGCACCAGATTCTAGGATGCCCTACAGGGCTGCTGTCTCTCTAAAC | 2280 |
| Qy | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTAAAGAGTGTGCAATTATGTCTCTGCAAAA | 2340 |
| | | CCTGCTCATCAACTAGGAAACCTCAGGCTAAAGAGTGTGCAATTATGTCTCTGCAAAA | |

| | | | |
|----|------|---|------|
| Db | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTTAAAGAGTGTGCAATTATGTCCTCTGCAAAA | 2340 |
| Qy | 2341 | AGGCCACTGTGGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTTCAGAAC | 2400 |
| Db | 2341 | | 2400 |
| Qy | 2401 | AATGAGATCATTTAAAAATGGGATGATTACGGCAAGATATGCTAACACTCAAATT | 2460 |
| Db | 2401 | | 2460 |
| Qy | 2461 | ATTCGTATTATGGAAAATATCTGGAAACATCAAGGTCTGATCTCGAATGTTACCTTAT | 2520 |
| Db | 2461 | | 2520 |
| Qy | 2521 | GGTTGTCTGTCATCGTGACTGTGTGGACTTATTGAGGTGGTGCAGAATTCTCACACT | 2580 |
| Db | 2521 | | 2580 |
| Qy | 2581 | ATTATGCAAATTCACTGCAAAGGCGGCTTGAAGGTGCACTGCAGTTAACAGCCACACA | 2640 |
| Db | 2581 | | 2640 |
| Qy | 2641 | CTACATCAGTGGCTAAAGACAAGAACAAAGGAGAAATATATGATGCAGCCATTGACCTG | 2700 |
| Db | 2641 | | 2700 |
| Qy | 2701 | TTTACACGTTCATGTGCTGGACTGTGTAGCTACCTTCATTTGGAAATTGGAGATCGT | 2760 |
| Db | 2701 | | 2760 |
| Qy | 2761 | CACAATAGTAACATCATGGTAAAGACGATGGACAACGTGTTCATATAGATTGGACAC | 2820 |
| Db | 2761 | | 2820 |
| Qy | 2821 | TTTTGGATCACAAGAAGAAAAATTGGTTATAACGAGAACGTGTGCCATTGTTTG | 2880 |
| Db | 2821 | | 2880 |
| Qy | 2881 | ACACAGGATTCTTAATAGTGATTAGTAAAGGAGCCAAAGAACATGCACAAAGACAAGAGAA | 2940 |
| Db | 2881 | | 2940 |
| Qy | 2941 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACAGCATGCCAAT | 3000 |
| Db | 2941 | | 3000 |
| Qy | 3001 | CTCTTCATAAAATCTTCTCAATGATGCTGGCTCTGGAATGCCAGAACTACAATCTTT | 3060 |
| Db | 3001 | | 3060 |

| | |
|----|--|
| Qy | 3061 GATGACATTGCATACATCGAAAGACCTAGCCTTAGATAAAACTGAGCAAGAGGCTTG 3120 |
| Db | 3061 GATGACATTGCATACATCGAAAGACCTAGCCTTAGATAAAACTGAGCAAGAGGCTTG 3120 |
| Qy | 3121 GAGTATTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT 3180 |
| Db | 3121 GAGTATTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT 3180 |
| Qy | 3181 TGGATCTCCACACAATTAAACAGCATGCATTGAACTGAAAGATAACTGAGAAAATGAAA 3240 |
| Db | 3181 TGGATCTCCACACAATTAAACAGCATGCATTGAACTGAAAGATAACTGAGAAAATGAAA 3240 |
| Qy | 3241 GCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGCAAAGACCGATTGCA 3300 |
| Db | 3241 GCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGCAAAGACCGATTGCA 3300 |
| Qy | 3301 TAGGAATTGCACAATCCATGAACAGCATTAGATTACAGCAAGAACAGAAATAAAATACT 3360 |
| Db | 3301 TAGGAATTGCACAATCCATGAACAGCATTAGATTACAGCAAGAACAGAAATAAAATACT 3360 |
| Qy | 3361 ATATAATTAAATAATGTAAACGCAAACAGGGTTTGATAGCACTTAAACTAGTTCATTT 3420 |
| Db | 3361 ATATAATTAAATAATGTAAACGCAAACAGGGTTTGATAGCACTTAAACTAGTTCATTT 3420 |
| Qy | 3421 AAAA 3424 |
| Db | 3421 AAAA 3424 |

RESULT 8

AAQ51156

ID AAQ51156 standard; cDNA; 3412 BP.

XX

AC AAQ51156;

XX

DT 25-MAR-2003 (revised)

DT 12-APR-1994 (first entry)

XX

DE Human p110 cDNA.

XX

KW Phosphoinositide kinase; PI; p85 subunit; screening; agonist; antagonist;
KW cell proliferation; inhibition; prophylaxis; therapy; platelets;
KW neutrophil activity; 3-phosphorylated phosphoinositides; ds.

XX

OS Homo sapiens.

XX

| FH | Key | Location/Qualifiers |
|----|-----|---------------------|
| FT | CDS | 1..3207 |

FT /*tag= a
 FT /note= "PI3- kinase p110"
 XX
 PN WO9321328-A1.
 XX
 PD 28-OCT-1993.
 XX
 PF 13-APR-1993; 93WO-GB000761.
 XX
 PR 13-APR-1992; 92GB-00008135.
 XX
 PA (LUDW-) LUDWIG INST CANCER RES.
 XX
 PI Hiles ID, Fry MJ, Dhand R, Waterfield MD, Parker PJ, Otsu M;
 PI Panayotou G, Volinia S, Gout I;
 XX
 DR WPI; 1993-351738/44.
 DR P-PSDB; AAR43342.
 XX
 PT Recombinant polypeptide(s) - with phosphoinositide-3 kinase activity,
 PT useful for controlling cell proliferation.
 XX
 PS Claim 7; Fig 16; 146pp; English.
 XX
 CC Southern blot analysis was performed using a bovine cDNA probe contg. a
 CC fragment of a PI3-kinase-encoding sequence and human cDNA isolated from a
 CC cDNA library constructed from mRNA isolated from the human cell line
 CC KG1a. Positive clones were sequenced to give the human PI3 kinase p110
 CC sequence shown. This sequence has 95 percent homology with the bovine
 CC sequence. The domain encoding residues 19- 100 of human p110 is
 CC sufficient to encode the kinase which will associate with the p85 kinase
 CC subunit. The gene may be used to provide a protein with PI3 kinase
 CC activity, and is useful for screening for (ant)agonists of PI3 kinase
 CC activity which could be useful for stimulation or inhibition of cell
 CC proliferation and hence prophylaxis or therapy. Platelet or neutrophil
 CC activity or blood glucose levels can be controlled using the kinase. See
 CC also AAQ51155 and AAQ57522-3. (Updated on 25-MAR-2003 to correct PN
 CC field.) (Updated on 25-MAR-2003 to correct PI field.)
 XX
 SQ Sequence 3412 BP; 1128 A; 616 C; 706 G; 962 T; 0 U; 0 Other;

Query Match 99.6%; Score 3412; DB 1; Length 3412;
 Best Local Similarity 100.0%;
 Matches 3412; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Qy 13 ATGCCTCCAAGACCATCATCAGGTGAACGTGGGGATCCACTTGATGCCCAAGAAC 72
 |||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 1 ATGCCTCCAAGACCATCATCAGGTGAACGTGGGGATCCACTTGATGCCCAAGAAC 60

| | | | |
|----|-----|---|-----|
| Qy | 73 | CTAGTGGATTTACTACCAAATGGAATGATAGTGACTTAGAATGCCCTCCGTGAGGCT | 132 |
| Db | 61 | CTAGTGGATTTACTACCAAATGGAATGATAGTGACTTAGAATGCCCTCCGTGAGGCT | 120 |
| Qy | 133 | ACATTAGTAACTATAAAGCATGAACATTAAAGAAGCAAGAAAATACCCTCTCCATCAA | 192 |
| Db | 121 | ACATTAGTAACTATAAAGCATGAACATTAAAGAAGCAAGAAAATACCCTCTCCATCAA | 180 |
| Qy | 193 | CTTCTTCAGATGAATCTCTACATTTCTGAAGTGTACCCAGAACAGCAGAAAGGGAA | 252 |
| Db | 181 | CTTCTTCAGATGAATCTCTACATTTCTGAAGTGTACCCAGAACAGCAGAAAGGGAA | 240 |
| Qy | 253 | GAATTTTTGATGAAACAAGACGACTTGTGATCTCGGCTTTTCAACCATTAAAAA | 312 |
| Db | 241 | GAATTTTTGATGAAACAAGACGACTTGTGATCTCGGCTTTTCAACCATTAAAAA | 300 |
| Qy | 313 | GTAATTGAAACCACTAGGCACCGTGAAGAAAAGATCCTCAATCGAGAAAATTGGTTGCT | 372 |
| Db | 301 | GTAATTGAAACCACTAGGCACCGTGAAGAAAAGATCCTCAATCGAGAAAATTGGTTGCT | 360 |
| Qy | 373 | ATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTACAGGACTTCCGA | 432 |
| Db | 361 | ATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTACAGGACTTCCGA | 420 |
| Qy | 433 | AGAAATATTCTTAATGTTGAAAGAAGCTGTGGATCTAGGGATCTAATTCACCTCAT | 492 |
| Db | 421 | AGAAATATTCTTAATGTTGAAAGAAGCTGTGGATCTAGGGATCTAATTCACCTCAT | 480 |
| Qy | 493 | AGTAGAGCAATGTATGCTATCCGCCACATGTAGAATCTCACAGAGCTGCCAAGCAC | 552 |
| Db | 481 | AGTAGAGCAATGTATGCTATCCGCCACATGTAGAATCTCACAGAGCTGCCAAGCAC | 540 |
| Qy | 553 | ATATATAATAATTGGATAGAGGCCAATAATAGTGGTATTGGTAATAGTTCTCCA | 612 |
| Db | 541 | ATATATAATAATTGGATAGAGGCCAATAATAGTGGTATTGGTAATAGTTCTCCA | 600 |
| Qy | 613 | AATAATGACAAGCAGAAGTATACTCTGAAAATCAACCATGACTGTGCCAGAACAGTA | 672 |
| Db | 601 | AATAATGACAAGCAGAAGTATACTCTGAAAATCAACCATGACTGTGCCAGAACAGTA | 660 |
| Qy | 673 | ATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTCTATCATCTGAACAATTAAAA | 732 |
| Db | 661 | ATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTCTATCATCTGAACAATTAAAA | 720 |
| Qy | 733 | CTCTGTGTTAGAATATCAGGGCAAGTACATTTAAAAGTGTGGATGTGATGAATAC | 792 |
| Db | 721 | CTCTGTGTTAGAATATCAGGGCAAGTACATTTAAAAGTGTGGATGTGATGAATAC | 780 |
| Qy | 793 | TTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATAAGAACAGCTGTATAATGCTGGG | 852 |

| | | | |
|----|------|--|------|
| Db | 781 | TTCTAGAAAAATATCCTGAGTCAGTATAAGTATAAGAAGCTATAATGCTGGG | 840 |
| Qy | 853 | AGGATGCCAATTGAAAGATGATGGCTAAAGAACGCTTATTCTCACTGCCAATGGAC | 912 |
| Db | 841 | AGGATGCCAATTGAAAGATGATGGCTAAAGAACGCTTATTCTCACTGCCAATGGAC | 900 |
| Qy | 913 | TGTTTACAATGCCATCTATTCCAGACGCATTCCACAGCTACACCATATATGAATGGA | 972 |
| Db | 901 | TGTTTACAATGCCATCTATTCCAGACGCATTCCACAGCTACACCATATATGAATGGA | 960 |
| Qy | 973 | GAAACATCTACAAAATCCCTTGGGTATAAATAGACTCAGAATAAAATTCTTGT | 1032 |
| Db | 961 | GAAACATCTACAAAATCCCTTGGGTATAAATAGACTCAGAATAAAATTCTTGT | 1020 |
| Qy | 1033 | GCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTATGTCGAACAGGTATC | 1092 |
| Db | 1021 | GCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTATGTCGAACAGGTATC | 1080 |
| Qy | 1093 | TACCATGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGTACCTGTCAT | 1152 |
| Db | 1081 | TACCATGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGTACCTGTCAT | 1140 |
| Qy | 1153 | CCCAGGTGGAATGAATGGCTGAATTATGATATACATTCTGATCTCCTCGTGTGCT | 1212 |
| Db | 1141 | CCCAGGTGGAATGAATGGCTGAATTATGATATACATTCTGATCTCCTCGTGTGCT | 1200 |
| Qy | 1213 | CGACTTGCCTTCCATTGCTCTGTTAAAGGCCGAAAGGGTCTAAAGAGGAACACTGT | 1272 |
| Db | 1201 | CGACTTGCCTTCCATTGCTCTGTTAAAGGCCGAAAGGGTCTAAAGAGGAACACTGT | 1260 |
| Qy | 1273 | CCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTAGTATCTGGAAAA | 1332 |
| Db | 1261 | CCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTAGTATCTGGAAAA | 1320 |
| Qy | 1333 | ATGGCTTGAAATTTGCCAGTACCTCATGGATTAGAAGATTGCTGAACCTATTGGT | 1392 |
| Db | 1321 | ATGGCTTGAAATTTGCCAGTACCTCATGGATTAGAAGATTGCTGAACCTATTGGT | 1380 |
| Qy | 1393 | GTTACTGGATCAAATCCAATAAGAACCTCCATGCTTAGAGTTGGAGTTGACTGGTC | 1452 |
| Db | 1381 | GTTACTGGATCAAATCCAATAAGAACCTCCATGCTTAGAGTTGGAGTTGACTGGTC | 1440 |
| Qy | 1453 | AGCAGTGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCCAATTGGCTGTA | 1512 |
| Db | 1441 | AGCAGTGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCCAATTGGCTGTA | 1500 |
| Qy | 1513 | TCCCGAGAAGCAGGATTAGCTATTCCACGCAGGACTGAGTAACAGACTAGCTAGAGAC | 1572 |

| | | | |
|----|------|---|------|
| Db | 1501 | TCCCGAGAAGCAGGATTAGCTATTCCCACGCAGGACTGAGTAACAGACTAGCTAGAGAC | 1560 |
| Qy | 1573 | AATGAATTAAAGGGAAAATGACAAAGAACAGCTCAAAAGCAATTCTACACGAGATCCTCTC | 1632 |
| Db | 1561 | AATGAATTAAAGGGAAAATGACAAAGAACAGCTCAAAAGCAATTCTACACGAGATCCTCTC | 1620 |
| Qy | 1633 | TCTGAAATCACTGAGCAGGAGAAAGATTCTATGGAGTCACAGACACTATTGTGTAAC | 1692 |
| Db | 1621 | TCTGAAATCACTGAGCAGGAGAAAGATTCTATGGAGTCACAGACACTATTGTGTAAC | 1680 |
| Qy | 1693 | ATCCCCGAAATTCTACCCAAATTGCTTCTGTCTGTTAAATGAAATTCTAGAGATGAAGTA | 1752 |
| Db | 1681 | ATCCCCGAAATTCTACCCAAATTGCTTCTGTCTGTTAAATGAAATTCTAGAGATGAAGTA | 1740 |
| Qy | 1753 | GCCCAGATGTATTGCTGGTAAAAGATTGGCCTCCAATCAAACCTGAACAGGCTATGGAA | 1812 |
| Db | 1741 | GCCCAGATGTATTGCTGGTAAAAGATTGGCCTCCAATCAAACCTGAACAGGCTATGGAA | 1800 |
| Qy | 1813 | CTTCTGGACTGTAATTACCCAGATCCTATGGTTCGAGGTTTGCTGTTGGTCTGGAA | 1872 |
| Db | 1801 | CTTCTGGACTGTAATTACCCAGATCCTATGGTTCGAGGTTTGCTGTTGGTCTGGAA | 1860 |
| Qy | 1873 | AAATATTAACAGATGACAAACTTCTCAGTATTAATTCACTAGTAGTACAGGTCTAAAA | 1932 |
| Db | 1861 | AAATATTAACAGATGACAAACTTCTCAGTATTAATTCACTAGTAGTACAGGTCTAAAA | 1920 |
| Qy | 1933 | TATGAACAATATTGGATAACCTGCTTGTGAGATTTTACTGAAGAAAGCATGACTAAT | 1992 |
| Db | 1921 | TATGAACAATATTGGATAACCTGCTTGTGAGATTTTACTGAAGAAAGCATGACTAAT | 1980 |
| Qy | 1993 | CAAAGGATTGGGCACTTTCTTTGGCATTTAAATCTGAGATGCCACAATAAACAGTT | 2052 |
| Db | 1981 | CAAAGGATTGGGCACTTTCTTTGGCATTTAAATCTGAGATGCCACAATAAACAGTT | 2040 |
| Qy | 2053 | AGCCAGAGGTTGGCCTGCTTTGGAGTCCTATTGTCGTGCATGTGGGATGTATTGAAG | 2112 |
| Db | 2041 | AGCCAGAGGTTGGCCTGCTTTGGAGTCCTATTGTCGTGCATGTGGGATGTATTGAAG | 2100 |
| Qy | 2113 | CACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTATTAACCTAACATCTCAAA | 2172 |
| Db | 2101 | CACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTATTAACCTAACATCTCAAA | 2160 |
| Qy | 2173 | CAGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTTGAGCAAATGAGG | 2232 |
| Db | 2161 | CAGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTTGAGCAAATGAGG | 2220 |
| Qy | 2233 | CGACCAGATTTCATGGATGCCCTACAGGGCTGCTGTCCTCTAAACCTGCTCATCAA | 2292 |
| Db | 2221 | CGACCAGATTTCATGGATGCCCTACAGGGCTGCTGTCCTCTAAACCTGCTCATCAA | 2280 |

| | | | |
|----|------|---|------|
| Qy | 2293 | CTAGGAAACCTCAGGCTTAAAGAGTGTGCAATTATGCTTCTGCAAAAAGGCCACTGTGG | 2352 |
| Db | 2281 | CTAGGAAACCTCAGGCTTAAAGAGTGTGCAATTATGCTTCTGCAAAAAGGCCACTGTGG | 2340 |
| Qy | 2353 | TTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTTCAGAACAAATGAGATCATC | 2412 |
| Db | 2341 | TTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTTCAGAACAAATGAGATCATC | 2400 |
| Qy | 2413 | TTTAAAAATGGGGATGATTACGGCAAGATATGCTAACACTTCAAATTATTCGTATTATG | 2472 |
| Db | 2401 | TTTAAAAATGGGGATGATTACGGCAAGATATGCTAACACTTCAAATTATTCGTATTATG | 2460 |
| Qy | 2473 | GAAAATATCTGGCAAAATCAAGGTCTTGATCTCGAATGTTACCTTATGGTTGTCTGTCA | 2532 |
| Db | 2461 | GAAAATATCTGGCAAAATCAAGGTCTTGATCTCGAATGTTACCTTATGGTTGTCTGTCA | 2520 |
| Qy | 2533 | ATCGGTGACTGTGTGGACTTATTGAGGGTGTGCGAAATTCTCACACTATTATGCAAATT | 2592 |
| Db | 2521 | ATCGGTGACTGTGTGGACTTATTGAGGGTGTGCGAAATTCTCACACTATTATGCAAATT | 2580 |
| Qy | 2593 | CAGTGCAAAGGCAGGCTTGAAGGTGCACTGCAGTTAACAGCCACACACTACATCAGTGG | 2652 |
| Db | 2581 | CAGTGCAAAGGCAGGCTTGAAGGTGCACTGCAGTTAACAGCCACACACTACATCAGTGG | 2640 |
| Qy | 2653 | CTCAAAGACAAGAACAAAGGAGAAATATGATGTCAGGCCATTGACCTGTTACAGTTCA | 2712 |
| Db | 2641 | CTCAAAGACAAGAACAAAGGAGAAATATGATGTCAGGCCATTGACCTGTTACAGTTCA | 2700 |
| Qy | 2713 | TGTGCTGGATACTGTGTAGCTACCTCATTTGGAAATTGGAGATCGTCACAATAGTAAC | 2772 |
| Db | 2701 | TGTGCTGGATACTGTGTAGCTACCTCATTTGGAAATTGGAGATCGTCACAATAGTAAC | 2760 |
| Qy | 2773 | ATCATGGTAAAGACGATGGACAACACTGTTCATATAGATTGGACACTTTGGATCAC | 2832 |
| Db | 2761 | ATCATGGTAAAGACGATGGACAACACTGTTCATATAGATTGGACACTTTGGATCAC | 2820 |
| Qy | 2833 | AAGAAGAAAAATTGGTTATAAACGAGAACGTGTGCCATTGTTGACACAGGATTC | 2892 |
| Db | 2821 | AAGAAGAAAAATTGGTTATAAACGAGAACGTGTGCCATTGTTGACACAGGATTC | 2880 |
| Qy | 2893 | TTAATAGTAGTAGTAAAGGAGCCAAAGAATGCACAAAGACAAGAGAATTGAGAGGTT | 2952 |
| Db | 2881 | TTAATAGTAGTAGTAAAGGAGCCAAAGAATGCACAAAGACAAGAGAATTGAGAGGTT | 2940 |
| Qy | 2953 | CAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACAGCATGCCAATCTCTCATAAAT | 3012 |
| Db | 2941 | CAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACAGCATGCCAATCTCTCATAAAT | 3000 |

Qy 3013 CTTTCTCAATGATGCTGGCTCTGGAATGCCAGAACTACAATCTTGATGACATTGCA 3072
 |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 3001 CTTTCTCAATGATGCTGGCTCTGGAATGCCAGAACTACAATCTTGATGACATTGCA 3060

Qy 3073 TACATTGAAAGACCCTAGCCTTAGATAAAACTGAGCAAGAGGCTTGGAGTATTCATG 3132
 |||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 3061 TACATTGAAAGACCCTAGCCTTAGATAAAACTGAGCAAGAGGCTTGGAGTATTCATG 3120

Qy 3133 AAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGATTGGATCTCCAC 3192
 |||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 3121 AAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGATTGGATCTCCAC 3180

Qy 3193 ACAATTAAACAGCATGCACTGAAACTGAAAGATAACTGAGAAAATGAAAGCTCACTCGGA 3252
 |||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 3181 ACAATTAAACAGCATGCACTGAAACTGAAAGATAACTGAGAAAATGAAAGCTCACTCGGA 3240

Qy 3253 TTCCACACTGCACTGTTAATAACTCTCACAGCAGGCAAAGACCGATTGCATAGGAATTGCAC 3312
 |||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 3241 TTCCACACTGCACTGTTAATAACTCTCACAGCAGGCAAAGACCGATTGCATAGGAATTGCAC 3300

Qy 3313 AATCCATGAACAGCATTAGATTTACAGCAAGAACAGAAATAAAACTATATAATTAAA 3372
 |||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 3301 AATCCATGAACAGCATTAGATTTACAGCAAGAACAGAAATAAAACTATATAATTAAA 3360

Qy 3373 TAATGTAAACGCAAACAGGGTTGATAGCACTTAAACTAGTTCAATTCAAAA 3424
 |||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 3361 TAATGTAAACGCAAACAGGGTTGATAGCACTTAAACTAGTTCAATTCAAAA 3412

RESULT 9

AED31617

ID AED31617 standard; cDNA; 3412 BP.

XX

AC AED31617;

XX

DT 15-DEC-2005 (first entry)

XX

DE cDNA (SEQ ID No:1) encoding human phosphatidylinositol 3-kinase (PIK3CA).

XX

KW cancer; neoplasm; phosphatidylinositol 3-kinase; PIK3CA; tumor;
 KW chemotherapy; cytostatic; RNA interference; gene silencing;
 KW antisense therapy; gene; ss.

XX

OS Homo sapiens.

XX

| FH | Key | Location/Qualifiers |
|----|-----|---------------------|
| FT | CDS | 1..3207 |
| FT | | /*tag= a |
| FT | | /product= "PIK3CA" |

XX
 PN WO2005091849-A2.

XX
 PD 06-OCT-2005.

XX
 PF 18-FEB-2005; 2005WO-US005193.

XX
 PR 02-MAR-2004; 2004US-0548886P.

XX
 PA (UYJO) UNIV JOHNS HOPKINS.

XX
 PI Samuels Y, Velculescu V, Kinzler KW, Vogelstein B;

XX
 DR WPI; 2005-713721/73.

DR P-PSDB; AED31619.

XX
 PT Assessing cancer in a human suspected of having cancer, by determining a
 PT non-synonymous, intragenic mutation in a phosphatidylinositol 3-kinase
 PT (PIK3CA) coding sequence in the body sample from a human.

XX
 PS Disclosure; SEQ ID NO 1; 107pp; English.

XX
 CC The invention relates to a method of assessing cancer in a body sample of
 CC a human suspected of having cancer. The method comprises determining a
 CC non-synonymous, intragenic mutation in a phosphatidylinositol 3-kinase
 CC (PIK3CA) coding sequence in the body sample, and identifying the human as
 CC likely to have cancer if a non-synonymous, intragenic mutation in PIK3CA
 CC coding sequence is determined in the body sample. Also described are: (1)
 CC a method of inhibiting progression of a tumor in a human; (2) a method of
 CC identifying candidate chemotherapeutic agents; (3) a method for
 CC delivering an appropriate chemotherapeutic drug to a patient in need; and
 CC (4) a set of one or more primers for amplifying and/or sequencing PIK3CA,
 CC the primers selected from forward primers, reverse primers, or sequencing
 CC primers, where the forward primers are selected from sequences given as
 CC SEQ ID NOS 6-165, the reverse primers are selected from sequences given
 CC as SEQ ID NOS 166-325, and the sequencing primers are selected sequences
 CC given as SEQ ID NOS 326-485 in the specification. The method of the
 CC invention is useful for assessing cancer in a body sample of a human
 CC suspected of having cancer, inhibiting progression of a tumor in a human,
 CC identifying candidate chemotherapeutic agents, and delivering an
 CC appropriate chemotherapeutic drug to a patient in need. This sequence
 CC encodes human PIK3CA.

XX
 SQ Sequence 3412 BP; 1128 A; 616 C; 706 G; 962 T; 0 U; 0 Other;

| | | | | | | | | | |
|-----------------------|--------|--------------|------|------------|---|--------|------|------|---|
| Query Match | 99.6% | Score | 3412 | DB | 4 | Length | 3412 | | |
| Best Local Similarity | 100.0% | | | | | | | | |
| Matches | 3412 | Conservative | 0 | Mismatches | 0 | Indels | 0 | Gaps | 0 |

| | | |
|----|-----|---|
| Qy | 13 | ATGCCTCCAAGACCATCATCAGGTGAAGTGTGGGCATCCACTTGATGCCCAAGAAC 72 |
| Db | 1 | ATGCCTCCAAGACCATCATCAGGTGAAGTGTGGGCATCCACTTGATGCCCAAGAAC 60 |
| Qy | 73 | CTAGTGGATTTACTACCAAATGGAATGATAGTGACTTAGAATGCCTCCGTGAGGCT 132 |
| Db | 61 | CTAGTGGATTTACTACCAAATGGAATGATAGTGACTTAGAATGCCTCCGTGAGGCT 120 |
| Qy | 133 | ACATTAGTAACTATAAAGCATGAACATTAAAGAAGCAAGAAAATCCCTCTCCATCAA 192 |
| Db | 121 | ACATTAGTAACTATAAAGCATGAACATTAAAGAAGCAAGAAAATCCCTCTCCATCAA 180 |
| Qy | 193 | CTTCTTCAGATGAATCTTACATTTCTGAAGTGTACCCAGAACAGCAGAAAGGAA 252 |
| Db | 181 | CTTCTTCAGATGAATCTTACATTTCTGAAGTGTACCCAGAACAGCAGAAAGGAA 240 |
| Qy | 253 | GAATTTTTGATGAAACAAGACGACTTGTGATCTCGCTTTTCAACCATTAAAAA 312 |
| Db | 241 | GAATTTTTGATGAAACAAGACGACTTGTGATCTCGCTTTTCAACCATTAAAAA 300 |
| Qy | 313 | GTAATTGAACCAGTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAAATTGGTTGCT 372 |
| Db | 301 | GTAATTGAACCAGTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAAATTGGTTGCT 360 |
| Qy | 373 | ATCGGCATGCCAGTGTGCAATTGATATGGTAAAGATCCTGAAGTACAGGACTCCGA 432 |
| Db | 361 | ATCGGCATGCCAGTGTGCAATTGATATGGTAAAGATCCTGAAGTACAGGACTCCGA 420 |
| Qy | 433 | AGAAATATTCTTAATGTTGTAAGAACAGCTGTGGATCTAGGGATCTAATTCACTCAT 492 |
| Db | 421 | AGAAATATTCTTAATGTTGTAAGAACAGCTGTGGATCTAGGGATCTAATTCACTCAT 480 |
| Qy | 493 | AGTAGAGCAATGTATGCTATCCGCCACATGTAGAATCTTCACCAGAGCTGCCAAAGCAC 552 |
| Db | 481 | AGTAGAGCAATGTATGCTATCCGCCACATGTAGAATCTTCACCAGAGCTGCCAAAGCAC 540 |
| Qy | 553 | ATATATAATAATTGGATAGAGGCCAATAATAGTGGTATTGGTAATAGTTCTCCA 612 |
| Db | 541 | ATATATAATAATTGGATAGAGGCCAATAATAGTGGTATTGGTAATAGTTCTCCA 600 |
| Qy | 613 | AATAATGACAAGCAGAAGTACTCTGAAAATCAACCATGACTGTGTGCCAGAACAGTA 672 |
| Db | 601 | AATAATGACAAGCAGAAGTACTCTGAAAATCAACCATGACTGTGTGCCAGAACAGTA 660 |
| Qy | 673 | ATTGCTGAAGCAATCAGGAAAAAAACTAGAACAGTATGTTGCTATCATCTGAACAATTAAAAA 732 |
| Db | 661 | ATTGCTGAAGCAATCAGGAAAAAAACTAGAACAGTATGTTGCTATCATCTGAACAATTAAAAA 720 |
| Qy | 733 | CCTGTGTTTAGAATATCAGGGCAAGTACATTAAAAGTGTGTGGATGTGATGAATAC 792 |

| | | | |
|----|------|---|------|
| Db | 721 | CTCTGTGTTAGAATATCAGGGCAAGTACATTAAAAGTGTGGATGTGAATAC | 780 |
| Qy | 793 | TTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATATAAGAAGCTGTATAATGCTGGG | 852 |
| Db | 781 | TTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATATAAGAAGCTGTATAATGCTGGG | 840 |
| Qy | 853 | AGGATGCCAATTGAAGATGATGGCTAAAGAAAGCCTTATTCTCACTGCCAATGGAC | 912 |
| Db | 841 | AGGATGCCAATTGAAGATGATGGCTAAAGAAAGCCTTATTCTCACTGCCAATGGAC | 900 |
| Qy | 913 | TGTTTACAATGCCATCTTATTCCAGCAGCATTCCACAGCTACACCATAATGAATGGA | 972 |
| Db | 901 | TGTTTACAATGCCATCTTATTCCAGCAGCATTCCACAGCTACACCATAATGAATGGA | 960 |
| Qy | 973 | GAAACATCTACAAAATCCCTTGGTTATAAATAGAGCACTCAGAATAAAAATTCTTG | 1032 |
| Db | 961 | GAAACATCTACAAAATCCCTTGGTTATAAATAGAGCACTCAGAATAAAAATTCTTG | 1020 |
| Qy | 1033 | GCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTATGTCGAACAGGTATC | 1092 |
| Db | 1021 | GCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTATGTCGAACAGGTATC | 1080 |
| Qy | 1093 | TACCATGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTACCTGTTCAAT | 1152 |
| Db | 1081 | TACCATGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTACCTGTTCAAT | 1140 |
| Qy | 1153 | CCCAGGTGGAATGAATGGCTGAATTATGATATATACATTCCGTATCTCGTGTGCT | 1212 |
| Db | 1141 | CCCAGGTGGAATGAATGGCTGAATTATGATATATACATTCCGTATCTCGTGTGCT | 1200 |
| Qy | 1213 | CGACTTGCCTTCCATTGCTCTGTTAAAGGCCAACGGGTGCTAAAGAGGAACACTGT | 1272 |
| Db | 1201 | CGACTTGCCTTCCATTGCTCTGTTAAAGGCCAACGGGTGCTAAAGAGGAACACTGT | 1260 |
| Qy | 1273 | CCATTGGCATGGGAAATATAAACTGTTGATTACACAGACACTCTAGTATCTGGAAA | 1332 |
| Db | 1261 | CCATTGGCATGGGAAATATAAACTGTTGATTACACAGACACTCTAGTATCTGGAAA | 1320 |
| Qy | 1333 | ATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTGAACCTATTGG | 1392 |
| Db | 1321 | ATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTGAACCTATTGG | 1380 |
| Qy | 1393 | GTTACTGGATCAAATCCAATAAGAAACTCCATGCTTAGAGTTGGAGTTGACTGGTC | 1452 |
| Db | 1381 | GTTACTGGATCAAATCCAATAAGAAACTCCATGCTTAGAGTTGGAGTTGACTGGTC | 1440 |
| Qy | 1453 | AGCAGTGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCCAATTGGCTGTA | 1512 |

| | | | |
|----|------|---|------|
| Db | 1441 | AGCAGTGTGGAAAGTCCAGATATGTCAGTGATTGAAGAGCATGCCAATTGGCTGTA | 1500 |
| Qy | 1513 | TCCCGAGAACAGCAGGATTTAGCTATTCCACGCAGGACTGAGTAACAGACTAGCTAGAGAC | 1572 |
| Db | 1501 | TCCCGAGAACAGCAGGATTTAGCTATTCCACGCAGGACTGAGTAACAGACTAGCTAGAGAC | 1560 |
| Qy | 1573 | AATGAATTAAGGGAAAATGACAAAGAACAGCTCAAAGCAATTCTACACGAGATCCTCTC | 1632 |
| Db | 1561 | AATGAATTAAGGGAAAATGACAAAGAACAGCTCAAAGCAATTCTACACGAGATCCTCTC | 1620 |
| Qy | 1633 | TCTGAAATCACTGAGCAGGAGAAAAGATTCTATGGAGTCACAGACACTATTGTGTAAC | 1692 |
| Db | 1621 | TCTGAAATCACTGAGCAGGAGAAAAGATTCTATGGAGTCACAGACACTATTGTGTAAC | 1680 |
| Qy | 1693 | ATCCCCGAAATTCTACCCAAATTGCTCTGTTAAATGGAATTCTAGAGATGAAGTA | 1752 |
| Db | 1681 | ATCCCCGAAATTCTACCCAAATTGCTCTGTTAAATGGAATTCTAGAGATGAAGTA | 1740 |
| Qy | 1753 | GCCCAGATGTATTGCTGGTAAAGATTGGCCTCCAATCAAACCTGAACAGGCTATGGAA | 1812 |
| Db | 1741 | GCCCAGATGTATTGCTGGTAAAGATTGGCCTCCAATCAAACCTGAACAGGCTATGGAA | 1800 |
| Qy | 1813 | CTTCTGGACTGTAATTACCCAGATCCTATGGTCGAGGTTTGCTGTTGGTCTGGAA | 1872 |
| Db | 1801 | CTTCTGGACTGTAATTACCCAGATCCTATGGTCGAGGTTTGCTGTTGGTCTGGAA | 1860 |
| Qy | 1873 | AAATATTTAACAGATGACAAACTTTCTCAGTATTAAATTCACTGAGTACAGGTCTAAAA | 1932 |
| Db | 1861 | AAATATTTAACAGATGACAAACTTTCTCAGTATTAAATTCACTGAGTACAGGTCTAAAA | 1920 |
| Qy | 1933 | TATGAACAATATTGGATAACTGCTTGAGATTTTACTGAAGAAAGCATTGACTAAT | 1992 |
| Db | 1921 | TATGAACAATATTGGATAACTGCTTGAGATTTTACTGAAGAAAGCATTGACTAAT | 1980 |
| Qy | 1993 | CAAAGGATTGGGCACTTCTTTGGCATTTAAATCTGAGATGCACAAATAAACAGTT | 2052 |
| Db | 1981 | CAAAGGATTGGGCACTTCTTTGGCATTTAAATCTGAGATGCACAAATAAACAGTT | 2040 |
| Qy | 2053 | AGCCAGAGGTTGGCCTGCTTGGAGTCTATTGCGATGTGGATGTATTGAAG | 2112 |
| Db | 2041 | AGCCAGAGGTTGGCCTGCTTGGAGTCTATTGCGATGTGGATGTATTGAAG | 2100 |
| Qy | 2113 | CACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTATTAACCTTAACGTACATTCTAAA | 2172 |
| Db | 2101 | CACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTATTAACCTTAACGTACATTCTAAA | 2160 |
| Qy | 2173 | CAGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTTGAGCAAATGAGG | 2232 |
| Db | 2161 | CAGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTTGAGCAAATGAGG | 2220 |

| | | | |
|----|------|--|------|
| Qy | 2233 | CGACCAGATTCATGGATGCCCTACAGGGCTGCTGTCCTCTAAACCTGCTCATCAA | 2292 |
| | | | |
| Db | 2221 | CGACCAGATTCATGGATGCCCTACAGGGCTGCTGTCCTCTAAACCTGCTCATCAA | 2280 |
| | | | |
| Qy | 2293 | CTAGGAAACCTCAGGCTAAAGAGTGTCAATTATGCTTCTGCAAAAGGCCACTGTGG | 2352 |
| | | | |
| Db | 2281 | CTAGGAAACCTCAGGCTAAAGAGTGTCAATTATGCTTCTGCAAAAGGCCACTGTGG | 2340 |
| | | | |
| Qy | 2353 | TTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTTCAAGAACATGAGATCATC | 2412 |
| | | | |
| Db | 2341 | TTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTTCAAGAACATGAGATCATC | 2400 |
| | | | |
| Qy | 2413 | TTAAAAATGGGATGATTACGGCAAGATATGCTAACACTTCAAATTATCGTATTATG | 2472 |
| | | | |
| Db | 2401 | TTAAAAATGGGATGATTACGGCAAGATATGCTAACACTTCAAATTATCGTATTATG | 2460 |
| | | | |
| Qy | 2473 | GAAAATCTGGCAAAATCAAGGTCTGATCTTCAAGTGTACCTTATGGTTGCTGTCA | 2532 |
| | | | |
| Db | 2461 | GAAAATCTGGCAAAATCAAGGTCTGATCTTCAAGTGTACCTTATGGTTGCTGTCA | 2520 |
| | | | |
| Qy | 2533 | ATCGGTGACTGTGTGGACTTATTGAGGTGGTGCAGAAATTCTCACACTATTATGCAAATT | 2592 |
| | | | |
| Db | 2521 | ATCGGTGACTGTGTGGACTTATTGAGGTGGTGCAGAAATTCTCACACTATTATGCAAATT | 2580 |
| | | | |
| Qy | 2593 | CAGTGCAGGGCGCTGAAAGGTGCACTGCAGTTCAACAGGCCACACACTACATCAGTGG | 2652 |
| | | | |
| Db | 2581 | CAGTGCAGGGCGCTGAAAGGTGCACTGCAGTTCAACAGGCCACACACTACATCAGTGG | 2640 |
| | | | |
| Qy | 2653 | CTCAAAGACAAGAACAAAGGAGAAATATGATGCAGCCATTGACCTGTTACACGTTCA | 2712 |
| | | | |
| Db | 2641 | CTCAAAGACAAGAACAAAGGAGAAATATGATGCAGCCATTGACCTGTTACACGTTCA | 2700 |
| | | | |
| Qy | 2713 | TGTGCTGGATACTGTGTAGCTACCTTCATTTGGAAATTGGAGATCGTCACAATAGAAC | 2772 |
| | | | |
| Db | 2701 | TGTGCTGGATACTGTGTAGCTACCTTCATTTGGAAATTGGAGATCGTCACAATAGAAC | 2760 |
| | | | |
| Qy | 2773 | ATCATGGTAAAGACGATGGACAACGTTCATATAGATTGGACACTTTGGATCAC | 2832 |
| | | | |
| Db | 2761 | ATCATGGTAAAGACGATGGACAACGTTCATATAGATTGGACACTTTGGATCAC | 2820 |
| | | | |
| Qy | 2833 | AAGAAGAAAAATTGGTTAAACGAGAACGTGTGCCATTGTTTGACACAGGATTC | 2892 |
| | | | |
| Db | 2821 | AAGAAGAAAAATTGGTTAAACGAGAACGTGTGCCATTGTTTGACACAGGATTC | 2880 |
| | | | |
| Qy | 2893 | TTAATAGTAGTAAAGGAGCCAAGAACATGCACAAAGACAAGAGAATTGAGAGGTTT | 2952 |
| | | | |
| Db | 2881 | TTAATAGTAGTAAAGGAGCCAAGAACATGCACAAAGACAAGAGAATTGAGAGGTTT | 2940 |
| | | | |

Qy 2953 CAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACAGCATGCCAATCTCTTCATAAAAT 3012
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 2941 CAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACAGCATGCCAATCTCTTCATAAAAT 3000
 Qy 3013 CTTTCTCAATGATGCTGGCTCTGGAATGCCAGAACACTACAATCTTGATGACATTGCA 3072
 ||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 3001 CTTTCTCAATGATGCTGGCTCTGGAATGCCAGAACACTACAATCTTGATGACATTGCA 3060
 Qy 3073 TACATTGAAAGACCCTAGCCTAGATAAAAAGTAGCAAGAGGCTTGGAGTATTCATG 3132
 ||||||||||||||||||||||||||||||||||||||||||||||||
 Db 3061 TACATTGAAAGACCCTAGCCTAGATAAAAAGTAGCAAGAGGCTTGGAGTATTCATG 3120
 Qy 3133 AAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGATTGGATCTCCAC 3192
 ||||||||||||||||||||||||||||||||||||||||||||
 Db 3121 AAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGATTGGATCTCCAC 3180
 Qy 3193 ACAATTAAACAGCATGATTGAACTGAAAGATAACTGAGAAAATGAAAGCTCACTCTGGA 3252
 ||||||||||||||||||||||||||||||||||||||||
 Db 3181 ACAATTAAACAGCATGATTGAACTGAAAGATAACTGAGAAAATGAAAGCTCACTCTGGA 3240
 Qy 3253 TTCCACACTGCACTGTTAATAACTCTCAGCAGGCAAAGACCGATTGCATAGGAATTGCAC 3312
 ||||||||||||||||||||||||||||||||||||||||
 Db 3241 TTCCACACTGCACTGTTAATAACTCTCAGCAGGCAAAGACCGATTGCATAGGAATTGCAC 3300
 Qy 3313 AATCCATGAACAGCATTAGATTACAGCAAGAACAGAAATAAAACTATATAATTAAA 3372
 ||||||||||||||||||||||||||||||||||||
 Db 3301 AATCCATGAACAGCATTAGATTACAGCAAGAACAGAAATAAAACTATATAATTAAA 3360
 Qy 3373 TAATGTAACGCAAACAGGGTTGATAGCACTTAAACTAGTTCAATTCAAAA 3424
 ||||||||||||||||||||||||||||||||
 Db 3361 TAATGTAACGCAAACAGGGTTGATAGCACTTAAACTAGTTCAATTCAAAA 3412

RESULT 10

ADU05935

ID ADU05935 standard; DNA; 3423 BP.

XX

AC ADU05935;

XX

DT 27-JAN-2005 (first entry)

XX

DE Novel bronchial cancer-associated human gene SeqID157.

XX

KW bronchial cancer; cytostatic; tumour-associated protein;

KW cancer detection; metastasis; tumour; gene; ds; human.

XX

OS Homo sapiens.

XX

PN DE10316701-A1.

XX
PD 04-NOV-2004.XX
PF 09-APR-2003; 2003DE-01016701.XX
PR 09-APR-2003; 2003DE-01016701.
XXPA (HINZ/) HINZMANN B.
PA (HERM/) HERMANN K.
PA (CAST/) HEIDEN CASTANOS-VELEZ E.
XXPI Mennerich D, Bruemmendorf T, Heiden E, Hermann K, Kinnemann H;
PI Li X, Roepcke S, Staub E, Hinzmann B, Rosenthal A, Pilarsky C;XX
DR WPI; 2004-786403/78.
DR P-PSDB; ADU06422.XX
PT New nucleic acid, and derived proteins, useful for diagnosis of bronchial
PT cancer and in screening for therapeutic and diagnostic agents.
XXPS Claim 1; SEQ ID NO 157; 1381pp; German.
XXCC This invention relates to a novel isolated nucleic acid associated with
CC bronchial cancer comprising 489 defined sequences given in the
CC specification. The invention may be useful for the production of
CC compounds with a cytostatic activity through the inhibition of expression
CC or activity of tumour-associated proteins. The novel DNA sequences and
CC the proteins/peptides encoded by them are used for detecting bronchial
CC cancer or determining the risk of developing it and to screen for
CC specific binding partners of the DNA or protein sequences, where the
CC binding partners are potentially useful as agents for treating or
CC diagnosing bronchial cancer. The DNA or protein sequences can also be
CC used for prognosis, detection of metastases and for secondary treatment
CC (of tumours that have been stabilised or are no longer detectable).
CC Detecting abnormal expression of the DNA sequences provides early
CC diagnosis of bronchial cancers. The present sequence is that of a novel
CC bronchial cancer-associated human gene sequence of the invention.
XX

SQ Sequence 3423 BP; 1134 A; 618 C; 709 G; 962 T; 0 U; 0 Other;

| | | | | | | | |
|-----------------------|-------|--------------|------|------------|---|--------|------|
| Query Match | 99.6% | Score | 3412 | DB | 3 | Length | 3423 |
| Best Local Similarity | 99.9% | | | | | | |
| Matches | 3423 | Conservative | 0 | Mismatches | 0 | Indels | 1 |
| | | | | | | Gaps | 1 |

Qy 1 AGGATCAGAACAAATGCCTCCAAGACCATCATCAGGTGAATGTGGGGCATCCACTTGATG 60
Db 1 AGGATCAGAACAAATGCCTCCAAGACCATCATCAGGTGAATGTGGGGCATCCACTTGATG 60

Qy 61 CCCCAAGAATCCTAGTGGATGTTACTACCAAATGGAATGATAGTGACTTTAGAATGC 120

| | | |
|----|-----|---|
| Db | 61 | CCCCCAAGAACCTAGTGGATGTTACTACCAAATGGAATGATAGTGACTTTAGAATGC 120 |
| Qy | 121 | CTCCGTGAGGCTACATTAGTAACATAAAAGCATGAACATTAAAGAAGCAAGAAAATAC 180 |
| Db | 121 | CTCCGTGAGGCTACATTAGTAACATAAAAGCATGAACATTAAAGAAGCAAGAAAATAC 180 |
| Qy | 181 | CTCTCCATCAACTTCTCAAGATGAATCTCTTACATTTCGTAAGTGTACCCAGAA 240 |
| Db | 181 | CTCTCCATCAACTTCTCAAGATGAATCTCTTACATTTCGTAAGTGTACCCAGAA 240 |
| Qy | 241 | GCAGAAAGGGAGAATTTTGATGAAACAAGACGACTTGTGATCTCGGTTTTCAA 300 |
| Db | 241 | GCAGAAAGGGAGAATTTTGATGAAACAAGACGACTTGTGATCTCGGTTTTCAA 300 |
| Qy | 301 | CCATTTAAAAGTAATTGAACCACTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA 360 |
| Db | 301 | CCATTTAAAAGTAATTGAACCACTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA 360 |
| Qy | 361 | ATGGTTTGCATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTA 420 |
| Db | 361 | ATGGTTTGCATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTA 420 |
| Qy | 421 | CAGGACTTCCAGAAGAAATTCTTAATGTTGAAAGAAGCTGTGGATCTTAGGGATCTT 480 |
| Db | 421 | CAGGACTTCCAGAAGAAATTCTTAATGTTGAAAGAAGCTGTGGATCTTAGGGATCTT 480 |
| Qy | 481 | AATTACACCTCATAGTAGAGCAATGTATGTCATCGCCACATGTAGAACATCTCACCAAGAG 540 |
| Db | 481 | AATTACACCTCATAGTAGAGCAATGTATGTCATCGCCACATGTAGAACATCTCACCAAGAG 540 |
| Qy | 541 | CTGCCAAAGCACATATATAATAAAATTGGATAGAGGCCAATAATAGTGGTGAATTGGTA 600 |
| Db | 541 | CTGCCAAAGCACATATATAATAAAATTGGATAGAGGCCAATAATAGTGGTGAATTGGTA 600 |
| Qy | 601 | ATAGTTCTCAAATAATGACAAGCAGAAGTATACCTCTGAAAATCAACCATGACTGTG 660 |
| Db | 601 | ATAGTTCTCAAATAATGACAAGCAGAAGTATACCTCTGAAAATCAACCATGACTGTG 660 |
| Qy | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTGCTATCATCT 720 |
| Db | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTGCTATCATCT 720 |
| Qy | 721 | GAACAATTAAAACCTCTGTGTTTAGAATATCAGGGCAAGTACATTAAAGTGTGGA 780 |
| Db | 721 | GAACAATTAAAACCTCTGTGTTTAGAATATCAGGGCAAGTACATTAAAGTGTGGA 780 |
| Qy | 781 | TGTGATGAATACCTCCTAGAAAAATCCTCTGAGTCAGTATAAGTATATAAGCTGT 840 |
| | | TGTGATGAATACCTCCTAGAAAAATCCTCTGAGTCAGTATAAGTATATAAGCTGT 840 |

| | | | |
|----|------|---|------|
| Db | 781 | TGTGATGAATACTCCTAGAAAAATATCCTTGAGTCAGTATAAGTATAAGAAGCTGT | 840 |
| Qy | 841 | ATAATGCTGGGAGGATGCCAATTGAAAGATGATGGCTAAAGAAAGCCTTATTCTCAA | 900 |
| Db | 841 | ATAATGCTGGGAGGATGCCAATTGAAAGATGATGGCTAAAGAAAGCCTTATTCTCAA | 900 |
| Qy | 901 | CTGCCAATGGACTGTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 960 |
| Db | 901 | CTGCCAATGGACTGTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 960 |
| Qy | 961 | TATATGAATGGAGAACATCTACAAAATCCCTTGGGTATAAAATAGAGCACTCAGAATA | 1020 |
| Db | 961 | TATATGAATGGAGAACATCTACAAAATCCCTTGGGTATAAAATAGAGCACTCAGAATA | 1020 |
| Qy | 1021 | AAAATTCTTGCAACCTACGTAACTAAATATTGAGACATTGACAAGATTATGTT | 1080 |
| Db | 1021 | AAAATTCTTGCAACCTACGTAACTAAATATTGAGACATTGACAAGATTATGTT | 1080 |
| Qy | 1081 | CGAACAGGTATCTACCATGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1140 |
| Db | 1081 | CGAACAGGTATCTACCATGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1140 |
| Qy | 1141 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATACATTCTGATCTT | 1200 |
| Db | 1141 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATACATTCTGATCTT | 1200 |
| Qy | 1201 | CCTCGTGTGTCGACTTGGCTTCCATTGCTCTGTAAAGGCCGAAAGGGTGTCTAA | 1260 |
| Db | 1201 | CCTCGTGTGTCGACTTGGCTTCCATTGCTCTGTAAAGGCCGAAAGGGTGTCTAA | 1260 |
| Qy | 1261 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTA | 1320 |
| Db | 1261 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTA | 1320 |
| Qy | 1321 | GTATCTGGAAAATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| Db | 1321 | GTATCTGGAAAATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| Qy | 1381 | AACCCTATTGGTGTACTGGATCAAATCCAAATAAGAAACTCCATGCTTAGAGTTGGAG | 1440 |
| Db | 1381 | AACCCTATTGGTGTACTGGATCAAATCCAAATAAGAAACTCCATGCTTAGAGTTGGAG | 1440 |
| Qy | 1441 | TTTGACTGGTCAGCAGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |
| Db | 1441 | TTTGACTGGTCAGCAGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |
| Qy | 1501 | AATTGGTCTGTATCCCGAGAAGCAGGATTAGCTATTCCACGCAGGACTGAGTAACAGA | 1560 |
| Db | 1501 | AATTGGTCTGTATCCCGAGAAGCAGGATTAGCTATTCCACGCAGGACTGAGTAACAGA | 1560 |

| | | | |
|----|------|--|------|
| Qy | 1561 | CTAGCTAGAGACAATGAATTAAAGGGAAAATGACAAAGAACAGCTCAAAGCAATTCTACA | 1620 |
| | | | |
| Db | 1561 | CTAGCTAGAGACAATGAATTAAAGGGAAAATGACAAAGAACAGCTCAAAGCAATTCTACA | 1620 |
| | | | |
| Qy | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAGATTCTATGGAGTCACAGACAC | 1680 |
| | | | |
| Db | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAGATTCTATGGAGTCACAGACAC | 1680 |
| | | | |
| Qy | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGTCTGTAAATGGAATTCT | 1740 |
| | | | |
| Db | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGTCTGTAAATGGAATTCT | 1740 |
| | | | |
| Qy | 1741 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAAGATTGGCCTCCAATCAAACCTGAA | 1800 |
| | | | |
| Db | 1741 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAAGATTGGCCTCCAATCAAACCTGAA | 1800 |
| | | | |
| Qy | 1801 | CAGGCTATGGAACTTCTGGACTGTAAATTACCCAGATCCTATGGTCGAGGTTTGCTGTT | 1860 |
| | | | |
| Db | 1801 | CAGGCTATGGAACTTCTGGACTGTAAATTACCCAGATCCTATGGTCGAGGTTTGCTGTT | 1860 |
| | | | |
| Qy | 1861 | CGGTGCTTGGAAAAATATTAACAGATGACAAACTTCTCAGTATTTAATTCACTAGTAGTA | 1920 |
| | | | |
| Db | 1861 | CGGTGCTTGGAAAAATATTAACAGATGACAAACTTCTCAGTATTTAATTCACTAGTAGTA | 1920 |
| | | | |
| Qy | 1921 | CAGGTCTAAATATGAACAATATTGGATAACTGCTGTGAGATTTACTGAAGAAA | 1980 |
| | | | |
| Db | 1921 | CAGGTCTAAATATGAACAATATTGGATAACTGCTGTGAGATTTACTGAAGAAA | 1980 |
| | | | |
| Qy | 1981 | GCATTGACTAATCAAAGGATTGGCACTTTTCTTTGGCATTTAAATCTGAGATGCAC | 2040 |
| | | | |
| Db | 1981 | GCATTGACTAATCAAAGGATTGGCACTTTTCTTTGGCATTTAAATCTGAGATGCAC | 2040 |
| | | | |
| Qy | 2041 | AATAAAACAGTTAGCCAGAGGTTGGCCTGCTTTGGAGTCCTATTGTCGTGCATGGG | 2100 |
| | | | |
| Db | 2041 | AATAAAACAGTTAGCCAGAGGTTGGCCTGCTTTGGAGTCCTATTGTCGTGCATGGG | 2100 |
| | | | |
| Qy | 2101 | ATGTATTGAAAGCACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTCATTAACCTA | 2160 |
| | | | |
| Db | 2101 | ATGTATTGAAAGCACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTCATTAACCTA | 2160 |
| | | | |
| Qy | 2161 | GACATTCTCAACAGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTT | 2220 |
| | | | |
| Db | 2161 | GACATTCTCAACAGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTT | 2220 |
| | | | |
| Qy | 2221 | GAGCAAATGAGGCACCAGATTCTATGGATGCCCTACAGGGCTTGCTCTCTAAAC | 2280 |
| | | | |
| Db | 2221 | GAGCAAATGAGGCACCAGATTCTATGGATGCCCTACAGGGCTTGCTCTCTAAAC | 2280 |
| | | | |

| | | | |
|----|------|---|------|
| Qy | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTAAAGAGTGTGCAATTATGTCTCTGAAAAA | 2340 |
| | | | |
| Db | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTAAAGAGTGTGCAATTATGTCTCTGAAAAA | 2340 |
| Qy | 2341 | AGGCCACTGTGGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTCAGAAC | 2400 |
| | | | |
| Db | 2341 | AGGCCACTGTGGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTCAGAAC | 2400 |
| Qy | 2401 | AATGAGATCATTTAAAAATGGGGATGATTACGGCAAGATATGCTAACACTTCAAATT | 2460 |
| | | | |
| Db | 2401 | AATGAGATCATTTAAAAATGGGGATGATTACGGCAAGATATGCTAACACTTCAAATT | 2460 |
| Qy | 2461 | ATTCGTATTATGAAAATATCTGGAAATCAAGGTCTGATCTCGAATGTTACCTTAT | 2520 |
| | | | |
| Db | 2461 | ATTCGTATTATGAAAATATCTGGAAATCAAGGTCTGATCTCGAATGTTACCTTAT | 2520 |
| Qy | 2521 | GGTTGTCTGCAATCGGTGACTGTGGGACTTATTGAGGTGGTGCAGAACATTCTCACACT | 2580 |
| | | | |
| Db | 2521 | GGTTGTCTGCAATCGGTGACTGTGGGACTTATTGAGGTGGTGCAGAACATTCTCACACT | 2580 |
| Qy | 2581 | ATTATGCAAATTCACTGCAAAGGCGGCTTGAAAGGTGCACTGCAGTTAACAGCCACACA | 2640 |
| | | | |
| Db | 2581 | ATTATGCAAATTCACTGCAAAGGCGGCTTGAAAGGTGCACTGCAGTTAACAGCCACACA | 2640 |
| Qy | 2641 | CTACATCAGTGGCTCAAAGACAAGAACAAAGGAGAAATATATGATGCAGCCATTGACCTG | 2700 |
| | | | |
| Db | 2641 | CTACATCAGTGGCTCAAAGACAAGAACAAAGGAGAAATATATGATGCAGCCATTGACCTG | 2700 |
| Qy | 2701 | TTTACACGTTCATGTGGATACTGTGTAGCTACCTTCATTTGGAAATTGGAGATCGT | 2760 |
| | | | |
| Db | 2701 | TTTACACGTTCATGTGGATACTGTGTAGCTACCTTCATTTGGAAATTGGAGATCGT | 2760 |
| Qy | 2761 | CACAATAGTAACATCATGGTAAAGACGATGGACAACGTGTTCATATAGATTGGACAC | 2820 |
| | | | |
| Db | 2761 | CACAATAGTAACATCATGGTAAAGACGATGGACAACGTGTTCATATAGATTGGACAC | 2820 |
| Qy | 2821 | TTTTGGATCACAAGAAGAAAAATTGGTTATAACGAGAACGTGTGCCATTGTTTG | 2880 |
| | | | |
| Db | 2821 | TTTTGGATCACAAGAAGAAAAATTGGTTATAACGAGAACGTGTGCCATTGTTTG | 2880 |
| Qy | 2881 | ACACAGGATTCTTAATAGTGATTAGTAAAGGAGGCCAAGAACATGCACAAAGACAAGAGAA | 2940 |
| | | | |
| Db | 2881 | ACACAGGATTCTTAATAGTGATTAGTAAAGGAGGCCAAGAACATGCACAAAGACAAGAGAA | 2940 |
| Qy | 2941 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGTTATCTAGTATTGACAGCATGCCAAT | 3000 |
| | | | |
| Db | 2941 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGTTATCTAGTATTGACAGCATGCCAAT | 3000 |
| Qy | 3001 | CTCTCATAAATCTTCTCAATGATGCTGGCTCTGAAACTACAAATCTTT | 3060 |

| | | | |
|----|------|--|------|
| Db | 3001 | CTCTTCATAAATCTTTCTCAATGATGCTGGCTCTGGAATGCCAGAACTACAATCTTT | 3060 |
| Qy | 3061 | GATGACATTGCATACATCGAAAGACCCTAGCCTTAGATAAAACTGAGCAAGAGGCTTG | 3120 |
| Db | 3061 | GATGACATTGCATACATCGAAAGACCCTAGCCTTAGATAAAACTGAGCAAGAGGCTTG | 3120 |
| Qy | 3121 | GAGTATTTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT | 3180 |
| Db | 3121 | GAGTATTTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT | 3180 |
| Qy | 3181 | TGGATCTTCCACACAATTAAACAGCATGCATTGAACTGAAAGATAACTGAGAAAATGAAA | 3240 |
| Db | 3181 | TGGATCTTCCACACAATTAAACAGCATGCATTGAACTGAAAGATAACTGAGAAAATGAAA | 3240 |
| Qy | 3241 | GCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGCAAAGACCGATTGCA | 3300 |
| Db | 3241 | GCTCACTCTGGATTCCACACTGCACTG-TAATAACTCTCAGCAGGCAAAGACCGATTGCA | 3299 |
| Qy | 3301 | TAGGAATTGCACAATCCATGAACAGCATTAGATTACAGCAAGAACAGAAATAAAACT | 3360 |
| Db | 3300 | TAGGAATTGCACAATCCATGAACAGCATTAGATTACAGCAAGAACAGAAATAAAACT | 3359 |
| Qy | 3361 | ATATAATTAAATAATGAAACGAAACAGGGTTGATAGCACTTAAACTAGTTCATTTC | 3420 |
| Db | 3360 | ATATAATTAAATAATGAAACGAAACAGGGTTGATAGCACTTAAACTAGTTCATTTC | 3419 |
| Qy | 3421 | AAAA 3424 | |
| Db | 3420 | | |
| Db | 3420 | AAAA 3423 | |

RESULT 11

ARC02473

ID ARC02473 standard; DNA; 3426 BP.

XX

AC ARC02473;

XX

DT 10-JUL-2008 (first entry)

XX

DE DNA fragments of a human Tox gene, 46524.

XX

KW DNA microarray; gene expression; drug screening; ds; Tox.

XX

OS Homo sapiens.

XX

PN US2007072175-A1.

XX

PD 29-MAR-2007.

XX
PF 15-MAY-2006; 2006US-00433832.

XX
PR 13-MAY-2005; 2005US-0680473P.
PR 13-MAY-2005; 2005US-0680544P.

XX
PA (BIOJ) BIOGEN IDEC MA INC.

XX
PI Cooper MT, Kinch D, Rosenberg M, Subramaniam SS, Szak ST, Li H;
PI Bandaru R, Derbel M;

XX
DR WPI; 2007-432796/41.

XX
PT New nucleotide array comprises polynucleotide probes complementary to, or
PT fragments of, Cynomolgus monkey genes, useful for detecting changes in
PT gene expression upon administration of a therapeutic agent.

XX
PS Claim 18; SEQ ID NO 46524; 33pp; English.

XX
CC The new invention relates to a nucleotide array for detecting changes in
CC gene expression upon administration of a therapeutic agent. The
CC microarray has polynucleotide probes complementary to, or fragments of,
CC Cynomolgus monkey genes, where each polynucleotide probe is immobilized
CC to a discrete and known spot on a solid support. The polynucleotide
CC probes are complementary to, or fragments of, any portion of an ortholog
CC of a human gene, preferably a Tox gene. The probes are any of SEQ ID NO.
CC 8882-9186. The probes are also complementary to, or fragments of, any
CC portion of any of SEQ ID NO. 1-8881 or 9187-18598. The nucleotide array
CC has at least one probe complementary to, or a fragment of, any portion of
CC any human gene, where the probe from a human gene is any of SEQ ID NO.
CC 43226-48714, or is complementary to, or a fragment of, any portion of any
CC of SEQ ID NO. 43450-48714. The array has at least one probe complementary
CC to, or a fragment of, any portion of any Rhesus monkey gene, where the
CC probe from a Rhesus monkey gene is any of SEQ ID NO. 35841-36074, or is
CC complementary to, or a fragment of, any portion of any of SEQ ID NO.
CC 18599-35840 or 36075-43225. It also has at least one probe complementary
CC to, or a fragment of, any portion of a Rhesus monkey gene and at least
CC one probe complementary to, or a fragment of, any portion of any human
CC gene. The nucleotide array is useful for detecting changes in gene
CC expression upon administration of a therapeutic agent. It can be used for
CC characterizing the actions, targets, and toxicities of therapeutic agents
CC in primates, e.g. a human, a Cynomolgus monkey, or a Rhesus monkey. This
CC sequence is a DNA fragment of a human Tox gene.

XX
SQ Sequence 3426 BP; 1138 A; 623 C; 703 G; 962 T; 0 U; 0 Other;

| | | | | | | | | | |
|-----------------------|-------|--------------|--------|------------|----|--------|------|------|---|
| Query Match | 97.5% | Score | 3339.6 | DB | 6 | Length | 3426 | | |
| Best Local Similarity | 98.8% | | | | | | | | |
| Matches | 3385 | Conservative | 0 | Mismatches | 39 | Indels | 2 | Gaps | 2 |

| | | | |
|----|-----|---|-----|
| Qy | 1 | AGGATCAGAACATGCCTCCAAGACCATCATCAGGTGAACTGTGGGCATCCACTTGATG | 60 |
| | | | |
| Db | 1 | AGAATCAGAACATGCCTCCACGACCATCATCAGGTGAACTGTGGGCATCCACTTGATG | 60 |
| Qy | 61 | CCCCCAAGAACATCCTAGTGGATGTTACTACCAAATGGAATGATAGTGACTTTAGAATGC | 120 |
| | | | |
| Db | 61 | CCCCCAAGAACATCCTAGTAGAATGTTACTACCAAATGGAATGATAGTGACTTTAGAATGC | 120 |
| Qy | 121 | CTCCGTGAGGCATCACATTAGTAACATAAACGATGAACATTAAAGAAGCAAGAAAATAC | 180 |
| | | | |
| Db | 121 | CTCCGTGAGGCATCACATTAAATAACCATAAACGATGAACATTAAAGAAGCAAGAAAATAC | 180 |
| Qy | 181 | CCTCTCCATCAACTTCTCAAGATGAATCTTACATTTCTGAAGTGTACCCAGAA | 240 |
| | | | |
| Db | 181 | CCCCTCCATCAACTTCTCAAGATGAATCTTACATTTCTGAAGTGTACTCAAGAA | 240 |
| Qy | 241 | GCAGAAAGGGAGAACATTTTGATGAAACAAGACGACTTGTGATCTCGGTTTTCAA | 300 |
| | | | |
| Db | 241 | GCAGAAAGGGAGAACATTTTGATGAAACAAGACGACTTGTGACCTCGGTTTTCAA | 300 |
| Qy | 301 | CCATTTTAAAGTAATTGAACCACTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA | 360 |
| | | | |
| Db | 301 | CCCTTTTAAAGTAATTGAACCACTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA | 360 |
| Qy | 361 | ATTGGTTTGCATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTA | 420 |
| | | | |
| Db | 361 | ATTGGTTTGCATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTA | 420 |
| Qy | 421 | CAGGACTTCCGAAGAAATATTCTTAATGTTGAAAGAAGCTGTGGATCTTAGGGATCTT | 480 |
| | | | |
| Db | 421 | CAGGACTTCCGAAGAAATATTCTGAACGTTGAAAGAAGCTGTGGATCTTAGGGACCTC | 480 |
| Qy | 481 | AATTCACCTCATAGTAGAGCAATGTATGTCATCGCCACATGTAGAACATCTCACCAGAG | 540 |
| | | | |
| Db | 481 | AATTCACCTCATAGTAGAGCAATGTATGTCATCTCCAAATGTAGAACATCTCACCAGAA | 540 |
| Qy | 541 | CTGCCAAAGCACATATATAATAAAATTGGATAGAGGCCAATAATAGTGGTGAATTGGTA | 600 |
| | | | |
| Db | 541 | TTGCCAAAGCACATATATAATAAAATTAGATAAGGCCAATAATAGTGGTGAATTGGTA | 600 |
| Qy | 601 | ATAGTTCTCCAAATAATGACAAGCAGAAAGTATACTCTGAAAATCAACCATGACTGTG | 660 |
| | | | |
| Db | 601 | ATAGTTCTCCAAATAATGACAAGCAGAAAGTATACTCTGAAAATCAACCATGACTGTG | 660 |
| Qy | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTGCTATCATCT | 720 |
| | | | |
| Db | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTCGAAGTATGTTGCTATCCTCT | 720 |

| | | | |
|----|------|---|------|
| Qy | 721 | GAACAAATTAAAACCTCTGTGTTTAGAATATCAGGGCAAGTACATTTAAAAGTGTGGA | 780 |
| | | | |
| Db | 721 | GAACAACTAAAACCTCTGTGTTTAGAATATCAGGGCAAGTATATTTAAAAGTGTGGA | 780 |
| Qy | 781 | TGTGATGAATACTTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATATAAGAACGCT | 840 |
| | | | |
| Db | 781 | TGTGATGAATACTTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATATAAGAACGCT | 840 |
| Qy | 841 | ATAATGCTGGGAGGATGCCAATTGAAGATGATGGCTAAAGAAAGCCTTATTCTCAA | 900 |
| | | | |
| Db | 841 | ATAATGCTGGGAGGATGCCAATTGATGTTGATGGCTAAAGAAAGCCTTATTCTCAA | 900 |
| Qy | 901 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 960 |
| | | | |
| Db | 901 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 960 |
| Qy | 961 | TATATGAATGGAGAAACATCTACAAAATCCCTTGGGTATAAATAGAGCACTCAGAATA | 1020 |
| | | | |
| Db | 961 | TATATGAATGGAGAAACATCTACAAAATCCCTTGGGTATAAATAGTGCACTCAGAATA | 1020 |
| Qy | 1021 | AAAATTCTTGCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTATGTT | 1080 |
| | | | |
| Db | 1021 | AAAATTCTTGCAACCTACGTGAATGTAATATTGAGACATTGATAAGATCTATGTT | 1080 |
| Qy | 1081 | CGAACAGGTATCTACCAGGAGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1140 |
| | | | |
| Db | 1081 | CGAACAGGTATCTACCAGGAGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1140 |
| Qy | 1141 | CCTTGTCCAATCCCAGGTGAATGGCTGAATTATGATATACATTCCGTATCTT | 1200 |
| | | | |
| Db | 1141 | CCTTGTCCAATCCCAGGTGAATGGCTGAATTATGATATACATTCCGTATCTT | 1200 |
| Qy | 1201 | CCTCGTGTCTCGACTTGGCTTCCATTGCTCTGTTAAAGGCGAAAGGGTGTAAA | 1260 |
| | | | |
| Db | 1201 | CCTCGTGTCTCGACTTGGCTTCCATTGCTCTGTTAAAGGCGAAAGGGTGTAAA | 1260 |
| Qy | 1261 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTA | 1320 |
| | | | |
| Db | 1261 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTA | 1320 |
| Qy | 1321 | GTATCTGGAAAATGGCTTGAATCTTGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| | | | |
| Db | 1321 | GTATCTGGAAAATGGCTTGAATCTTGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| Qy | 1381 | AACCCTATTGGTGTACTGGATCAAATCAAATAAAGAAACTCCATGCTTAGAGTTGGAG | 1440 |
| | | | |
| Db | 1381 | AACCCTATTGGTGTACTGGATCAAATCAAATAAAGAAACTCCATGCTTAGAGTTGGAG | 1440 |
| Qy | 1441 | TTGACTGGTCAGCAGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |

| | | | |
|----|------|---|------|
| Db | 1441 | TTTGGACTGGTCAGCAGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |
| Qy | 1501 | AATTGGCTGTATCCCGAGAAGCAGGATTAGCTATTCCCACGCAGGACTGAGAACAGA | 1560 |
| Db | 1501 | AATTGGCTGTATCCCGAGAAGCAGGATTAGCTATTCCCACGCAGGACTGAGAACAGA | 1560 |
| Qy | 1561 | CTAGCTAGAGACAATGAATTAGGGAAAATGACAAAGAACAGCTAACAGCAATTCTACA | 1620 |
| Db | 1561 | CTAGCTAGAGACAATGAATTAGGGAAAATGACAAAGAACAGCTAACAGCAATTCTACA | 1620 |
| Qy | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAAGATTTCTATGGAGTCACAGACAC | 1680 |
| Db | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAAGATTTCTATGGAGTCACAGACAC | 1680 |
| Qy | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAATTGCTCTGTCGTAAATGGAATTCT | 1740 |
| Db | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAATTGCTCTGTCGTAAATGGAATTCT | 1740 |
| Qy | 1741 | AGAGATGAACTAGCCCAGATGTATTGCTTGGTAAAGATTGGCCTCCAATCAAACCTGAA | 1800 |
| Db | 1741 | AGAGATGAACTAGCCCAGATGTATTGCTTGGTAAAGATTGGCCTCCAATCAAACCTGAA | 1800 |
| Qy | 1801 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCCTATGGTCGAGGTTTGCTGTT | 1860 |
| Db | 1801 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCCTATGGTCGAGGTTTGCTGTT | 1860 |
| Qy | 1861 | CGGTGCTTGGAAAAATATTAACAGATGACAAACTTCTCAGTATTAACTCAGCTAGTA | 1920 |
| Db | 1861 | CGGTGCTTGGAAAAATATTAACAGATGACAAACTTCTCAGTATTAACTCAGCTAGTA | 1920 |
| Qy | 1921 | CAGGTCTAAATATGAACAAATTGGATAACTGCTGTGAGATTAACTGAAGAAA | 1980 |
| Db | 1921 | CAGGTCTAAATATGAACAAATTGGATAACTGCTGTGAGATTAACTGAAGAAA | 1980 |
| Qy | 1981 | GCATTGACTAACAGGATGGGCACTTTCTTTGGCATTAAAATCTGAGATGCAC | 2040 |
| Db | 1981 | GCATTGACTAACAGGATGGGCACTTTCTTTGGCATTAAAATCTGAGATGCAC | 2040 |
| Qy | 2041 | AATAAAACAGTTAGCCAGAGGTTGGCTGCTTGGAGTCCTATTGCGTCATGGG | 2100 |
| Db | 2041 | AATAAAACAGTTAGCCAGAGGTTGGCTGCTTGGAGTCCTATTGCGTCATGGG | 2100 |
| Qy | 2101 | ATGTATTGAAAGCACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTCATTAACCTA | 2160 |
| Db | 2101 | ATGTATTGAAAGCACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTCATTAACCTA | 2160 |
| Qy | 2161 | GACATTCTCAACAGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTT | 2220 |
| | | | |

| | | | |
|----|------|--|------|
| Db | 2161 | GACATTCTCAACAGGAGAAGAAGGGATGAAACACAAAAGGTACAGATGAAGTTTAGTT | 2220 |
| Qy | 2221 | GAGCAAATGAGGCGACCAGATTCATGGATGCCCTACAGGGCTTGCCTCTCTCTAAAC | 2280 |
| Db | 2221 | | |
| Db | 2221 | GAGCAAATGAGGCGACCAGATTCATGGATGCCCTACAGGGCTTGCCTCTCTCTAAAC | 2280 |
| Qy | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTTAAAGAGTGTGCAATTATGCTTCTGCAAAA | 2340 |
| Db | 2281 | | |
| Db | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTTGAAGAGTGTGCAATTATGCTTCTGCAAAA | 2340 |
| Qy | 2341 | AGGCCACTGTGGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTCAGAAC | 2400 |
| Db | 2341 | | |
| Db | 2341 | AGGCCACTGTGGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTCAGAAC | 2400 |
| Qy | 2401 | AATGAGATCATTTAAAAATGGGATGATTACGGCAAGATATGCTAACACTCAAATT | 2460 |
| Db | 2401 | | |
| Db | 2401 | AATGAGATCATTTAAAAATGGGATGATTACGGCAAGATATGCTAACACTCAAATT | 2460 |
| Qy | 2461 | ATTCGTATTATGAAAATATCTGCAAAATCAAGGTCTGATCTCGAATGTTACCTTAT | 2520 |
| Db | 2461 | | |
| Db | 2461 | ATTCGTATTATGAAAATATCTGCAAAATCAAGGTCTGATCTCGAATGTTACCTTAT | 2520 |
| Qy | 2521 | GGTTGTCTGTCAATCGGTGACTGTGTGGACTTATTGAGGTGGTGCAGAAATTCTCACACT | 2580 |
| Db | 2521 | | |
| Db | 2521 | GGTTGTCTGTCAATCGGTGACTGTGTGGACTTATTGAGGTGGTGCAGAAATTCTCACACT | 2580 |
| Qy | 2581 | ATTATGCAAATTCACTGCAAAGGCGGCTTGAAGAGTGCAGTCAACAGCCACACA | 2640 |
| Db | 2581 | | |
| Db | 2581 | ATTATGCAAATTCACTGCAAAGGCGGCTTGAAGAGTGCAGTCAACAGCCACACA | 2640 |
| Qy | 2641 | CTACATCAGTGGCTCAAAGACAAGAACAAAGGAGAAATATGATGCAGCCATTGACCTG | 2700 |
| Db | 2641 | | |
| Db | 2641 | CTACATCAGTGGCTCAAAGACAAGAACAAAGGAGAAATATGATGCAGCCATTGACCTG | 2700 |
| Qy | 2701 | TTTACACGTTCATGTGCTGGATACTGTGTAGCTACCTTCATTTGGAAATTGGAGATCGT | 2760 |
| Db | 2701 | | |
| Db | 2701 | TTTACACGTTCATGTGCTGGATACTGTGTAGCTACCTTCATTTGGAAATTGGAGATCGT | 2760 |
| Qy | 2761 | CACAATAGTAACATCATGGTAAAGACGATGGACAACGTGTTCATATAGATTTGGACAC | 2820 |
| Db | 2761 | | |
| Db | 2761 | CACAATAGTAACATCATGGTAAAGACGATGGACAACGTGTTCATATAGATTTGGACAC | 2820 |
| Qy | 2821 | TTTTGGATCACAAGAAGAAAAATTGGTATAACGAGAACGTGTGCCATTGTTTG | 2880 |
| Db | 2821 | | |
| Db | 2821 | TTTTGGATCACAAGAAGAAAAATTGGTATAACGAGAACGTGTGCCATTGTTTG | 2880 |
| Qy | 2881 | ACACAGGATTCTTAATAGTGTAGTAAAGGAGCCAAAGAATGCACAAAGACAAGAGAA | 2940 |
| Db | 2881 | | |
| Db | 2881 | ACACAGGATTCTTAATAGTGTAGTAAAGGAGCCAAAGAATGCACAAAGACAAGAGAA | 2940 |

Qy 2941 TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACAGCATGCCAAT 3000
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 2941 TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACAGCATGCCAAT 3000

Qy 3001 CTCTTCATAAAATCTTTCTCAATGATGCTTGGCTCTGGAATGCCAGAACTACAATCTTT 3060
 ||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 3001 CTCTTCATAAAATCTTTCTCAATGATGCTTGGCTCTGGAATGCCAGAACTACAATCTTT 3060

Qy 3061 GATGACATTGCATACATCGAAAGACCCTAGCCTTAGATAAAAAGTGGCAAGAGGCTTG 3120
 ||||||||||||||||||||||||||||||||||||||||||||||||
 Db 3061 GATGACATTGCATACATCGAAAGACCCTAGCCTTAGATAAAAAGTGGCAAGAGGCTTG 3120

Qy 3121 GAGTATTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT 3180
 ||||||||||||||||||||||||||||||||||||||||||||
 Db 3121 GAGTATTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT 3180

Qy 3181 TGGATCTCCACACAATTAAACAGCATGCATTGAACTG- AAAGATAACTGAGAAAATGAA 3239
 ||||||||||||||||||||||||||||||||||||||||||||
 Db 3181 TGGATCTCCACACAATTAAACAGCATGCATTGAACTGAAAAGATAACTGAGAAAATGAA 3240

Qy 3240 AGCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGCAAAGACCGATTGC 3299
 ||||||||||||||||||||||||||||||||||||||||
 Db 3241 AGCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGCAAAGACCGATTGC 3300

Qy 3300 ATAGGAATTGCACAATCCATGAACAGCATTAG- ATTACAGCAAGAACAGAAATAAAAATA 3358
 ||||||||||||||||||||||||||||||||||||
 Db 3301 ATAGGAATTGCACAATCCATGAACAGCATTAGAATTACAGCAAGAACAGAAATAAAAATA 3360

Qy 3359 CTATATAATTAAATAATGTAACAGCAAACAGGGTTGATAGCACTTAAACTAGTTCATT 3418
 ||||||||||||||||||||||||||||||||
 Db 3361 CTATATAATTAAATAATGTAACAGCAAACAGGGTTGATAGCACTTAAACTAGTTCATT 3420

Qy 3419 TCAAAA 3424
 |||||||
 Db 3421 TCAAAA 3426

RESULT 12

AEK54940

ID AEK54940 standard; DNA; 3724 BP.

XX

AC AEK54940;

XX

DT 11-JUN-2007 (revised)

DT 16-NOV-2006 (first entry)

XX

DE Human PIK3CA DNA, SEQ ID NO:7.

XX

KW phosphoinositide-3-kinase, catalytic, alpha; PIK3CA; genetic marker;
KW screening; adenocarcinoma; neoplasm; cytostatic; ds.

XX
OS Homo sapiens.

XX
PN WO2006094149-A2.

XX
PD 08-SEP-2006.

XX
PF 01-MAR-2006; 2006WO-US007493.

XX
PR 01-MAR-2005; 2005US-0657841P.

XX
PA (EXAC-) EXACT SCI CORP.

XX
PI Shuber AP;

XX
DR WPI; 2006-680485/70.

DR REFSEQ; NM_006218.

DR PC:NCBI; gi54792081.

DR PC_ENCPRO:NCBI; gi54792082.

XX
PT Screening for adenoma in a subject, comprises testing a sample for the
PT presence of each of a panel of genetic markers, where the panel is more
PT than 60% informative for adenoma.

XX
PS Disclosure; SEQ ID NO 7; 79pp; English.

XX
CC The invention relates to a method for screening a subject for the
CC presence of adenoma. The method comprises interrogating a sample from the
CC subject for each of a panel of genetic markers, where the panel is more
CC than 60% informative for adenoma, and where the presence of one or more
CC of the markers is indicative of adenoma. Also described are: (1) a method
CC of detecting indicia of adenoma, by assaying a sample from a subject for
CC the presence of one or more genetic abnormalities from a group of genetic
CC abnormalities that is more than 60% informative for adenoma; (2) a method
CC of detecting adenoma in a subject, by performing an assay on a sample
CC from the subject that is more than 60% informative for adenoma; and (3) a
CC kit comprising a group of oligonucleotides, where each oligonucleotide is
CC adapted for interrogating a genetic locus for the presence of a marker
CC from a panel that is at least 60% informative for adenoma. The methods
CC and kit of the invention are useful for screening for adenoma in a
CC subject. The adenoma is especially a colonic and/or invasive adenoma. The
CC methods can detect adenoma at an early stage with a high level of
CC confidence, increasing the chances of successful treatment. This sequence
CC represents a human DNA sequence that can be used as a genetic marker in
CC the method of the invention.

CC
CC Revised record issued on 11-JUN-2007 : Enhanced with precomputed

CC information from BOND.

XX

SQ Sequence 3724 BP; 1242 A; 684 C; 763 G; 1035 T; 0 U; 0 Other;

Query Match 97.5%; Score 3339.6; DB 4; Length 3724;
 Best Local Similarity 98.8%;
 Matches 3385; Conservative 0; Mismatches 39; Indels 2; Gaps 2;

| | | | |
|----|-----|---|-----|
| Qy | 1 | AGGATCAGAACATGCCTCCAAGACCATCATCAGGTGAACGTGGGCATCCACTTGATG | 60 |
| | | | |
| Db | 146 | AGAATCAGAACATGCCTCCACGACCATCATCAGGTGAACGTGGGCATCCACTTGATG | 205 |
| Qy | 61 | CCCCAAGAACCTAGTGGATGTTACTACCAAATGGAATGATAGTGACTTAAAGATGC | 120 |
| | | | |
| Db | 206 | CCCCAAGAACCTAGTGAATGTTACTACCAAATGGAATGATAGTGACTTAAAGATGC | 265 |
| Qy | 121 | CTCGTGAAGCTACATTAGTAACATAAGCATGAACATTAAAGCAAGAAAATAC | 180 |
| | | | |
| Db | 266 | CTCGTGAAGCTACATTAAATAACCATAAGCATGAACATTAAAGCAAGAAAATAC | 325 |
| Qy | 181 | CCTCTCCATCAACTTCTCAAGATGAATCTTCTACATTTCTGAAGTGTACCCAGAA | 240 |
| | | | |
| Db | 326 | CCTCTCCATCAACTTCTCAAGATGAATCTTCTACATTTCTGAAGTGTACTCAAGAA | 385 |
| Qy | 241 | GCAGAAAGGGAGAATTGGATGAAACAAGACGACTTGTGATCTCGGTTTTCAA | 300 |
| | | | |
| Db | 386 | GCAGAAAGGGAGAATTGGATGAAACAAGACGACTTGTGACCTCGGTTTTCAA | 445 |
| Qy | 301 | CCATTTAAAGTAATTGAAACAGTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA | 360 |
| | | | |
| Db | 446 | CCATTTAAAGTAATTGAAACAGTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA | 505 |
| Qy | 361 | ATGGTTTGCTATCGGCATGCCAGTGTGCAATTGATATGGTAAAGATCCTGAAGTA | 420 |
| | | | |
| Db | 506 | ATGGTTTGCTATCGGCATGCCAGTGTGCAATTGATATGGTAAAGATCCAGAAGTA | 565 |
| Qy | 421 | CAGGACTCCGAAGAAATTCTTAATGTTGAAAGAGCTGTGGATCTTAGGGATCTT | 480 |
| | | | |
| Db | 566 | CAGGACTCCGAAGAAATTCTGAACGTTGAAAGAGCTGTGGATCTTAGGGACCTC | 625 |
| Qy | 481 | AATTACACCTCATAGTAGAGCAATGTATGCTATCCGCCACATGTAGAAATCTCACAGAG | 540 |
| | | | |
| Db | 626 | AATTACACCTCATAGTAGAGCAATGTATGCTATCCCAAATGTAGAAATCTCACAGAA | 685 |
| Qy | 541 | CTGCCAAAGCACATATAATAAAATTGGATAGAGGCAAAATAAGTGGTGTGGTA | 600 |
| | | | |
| Db | 686 | CTGCCAAAGCACATATAATAAAATTAGATAAAGGGCAAAATAAGTGGTGTGGTA | 745 |
| Qy | 601 | ATAGTTCTCCAAATAATGACAAGCAGAAAGTATACTCTGAAAATCAACCATGACTGTG | 660 |

| | | | |
|----|------|---|------|
| Db | 746 | ATAGTTCTCAAATAATGACAAGCAGAAGTATACTCTGAAAATCAACCATGACTGTGA | 805 |
| Qy | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTGCTATCATCT | 720 |
| Db | 806 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTCGAAGTATGTTGCTATCCCTC | 865 |
| Qy | 721 | GAACAAATTAAAACCTCTGTTAGAATATCAGGGCAAGTACATTTAAAAGTGTGGA | 780 |
| Db | 866 | GAACAACTAAAACCTCTGTTAGAATATCAGGGCAAGTATATTTAAAAGTGTGGA | 925 |
| Qy | 781 | TGTGATGAAACTTCCTAGAAAATATCCTCTGAGTCAGTATAAGTATAAGAAGCTGT | 840 |
| Db | 926 | TGTGATGAAACTTCCTAGAAAATATCCTCTGAGTCAGTATAAGTATAAGAAGCTGT | 985 |
| Qy | 841 | ATAATGCTGGGAGGATGCCAATTGAAAGATGATGGCTAAAGAAAGCCTTATTCTCAA | 900 |
| Db | 986 | ATAATGCTGGGAGGATGCCAATTGATGTTGATGGCTAAAGAAAGCCTTATTCTCAA | 1045 |
| Qy | 901 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 960 |
| Db | 1046 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 1105 |
| Qy | 961 | TATATGAATGGAGAACATCTACAAAATCCCTTGGGTATAATAGAGCACTCAGAATA | 1020 |
| Db | 1106 | TATATGAATGGAGAACATCTACAAAATCCCTTGGGTATAATAGTGCACTCAGAATA | 1165 |
| Qy | 1021 | AAAATTCTTGTGCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTATGTT | 1080 |
| Db | 1166 | AAAATTCTTGTGCAACCTACGTGAATGTAATATTGAGACATTGATAAGATCTATGTT | 1225 |
| Qy | 1081 | CGAACAGGTATCTACCATGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1140 |
| Db | 1226 | CGAACAGGTATCTACCATGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1285 |
| Qy | 1141 | CCTGTTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATACATTCCGTACCTT | 1200 |
| Db | 1286 | CCTGTTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATACATTCCGTACCTT | 1345 |
| Qy | 1201 | CCTCGTGTGCTCGACTTGCCTTCCATTGCTCTGTTAAAGGCCGAAAGGGTGTAAA | 1260 |
| Db | 1346 | CCTCGTGTGCTCGACTTGCCTTCCATTGCTCTGTTAAAGGCCGAAAGGGTGTAAA | 1405 |
| Qy | 1261 | GAGGAACACTGTCCATTGGCATGGGGAAATAAAACTTGTGATTACACAGACACTCTA | 1320 |
| Db | 1406 | GAGGAACACTGTCCATTGGCATGGGGAAATAAAACTTGTGATTACACAGACACTCTA | 1465 |
| Qy | 1321 | GTATCTGGAAAATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |

| | | | |
|----|------|---|------|
| Db | 1466 | GTATCTGGAAAAATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTG | 1525 |
| Qy | 1381 | AACCCTATTGGTGTACTGGATCAAATCCAATAAAGAAAACCTCATGCTTAGAGTTGGAG | 1440 |
| Db | 1526 | AACCCTATTGGTGTACTGGATCAAATCCAATAAAGAAAACCTCATGCTTAGAGTTGGAG | 1585 |
| Qy | 1441 | TTTGACTGGTTCAGCAGTGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |
| Db | 1586 | TTTGACTGGTTCAGCAGTGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1645 |
| Qy | 1501 | AATTGGTCTGTATCCCGAGAACAGCAGGATTAGCTATTCCCACGCAGGACTGAGTAACAGA | 1560 |
| Db | 1646 | AATTGGTCTGTATCCCGAGAACAGCAGGATTAGCTATTCCCACGCAGGACTGAGTAACAGA | 1705 |
| Qy | 1561 | CTAGCTAGAGACAATGAATTAGGGAAAATGACAAAGAACAGCTCAAAGCAATTCTACA | 1620 |
| Db | 1706 | CTAGCTAGAGACAATGAATTAGGGAAAATGACAAAGAACAGCTCAAAGCAATTCTACA | 1765 |
| Qy | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAAGATTCTATGGAGTCACAGACAC | 1680 |
| Db | 1766 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAAGATTCTATGGAGTCACAGACAC | 1825 |
| Qy | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGTCTGTTAAATGGAATTCT | 1740 |
| Db | 1826 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGTCTGTTAAATGGAATTCT | 1885 |
| Qy | 1741 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAAGATTGGCCTCCAATCAAACCTGAA | 1800 |
| Db | 1886 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAAGATTGGCCTCCAATCAAACCTGAA | 1945 |
| Qy | 1801 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCTATGGTCGAGGTTTGCTGTT | 1860 |
| Db | 1946 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCTATGGTCGAGGTTTGCTGTT | 2005 |
| Qy | 1861 | CGGTGCTTGGAAAAATATTAACAGATGACAAACTTCTCAGTATTAAATTACAGCTAGTA | 1920 |
| Db | 2006 | CGGTGCTTGGAAAAATATTAACAGATGACAAACTTCTCAGTATTAAATTACAGCTAGTA | 2065 |
| Qy | 1921 | CAGGTCTAAATATGAACAAATTTGGATAACTTGCTGTGAGATTAACTGAAGAAA | 1980 |
| Db | 2066 | CAGGTCTAAATATGAACAAATTTGGATAACTTGCTGTGAGATTAACTGAAGAAA | 2125 |
| Qy | 1981 | GCATTGACTAATCAAAGGATGGGACTTTTCTTTGGCATTAAAATCTGAGATGCAC | 2040 |
| Db | 2126 | GCATTGACTAATCAAAGGATGGGACTTTTCTTTGGCATTAAAATCTGAGATGCAC | 2185 |
| Qy | 2041 | AATAAAACAGTTAGCCAGAGGTTGGCTGCTTTGGAGTCCTATTGCGTGCATGGG | 2100 |
| Db | 2186 | AATAAAACAGTTAGCCAGAGGTTGGCTGCTTTGGAGTCCTATTGCGTGCATGGG | 2245 |

| | | | |
|----|------|---|------|
| Qy | 2101 | ATGTATTGAAAGCACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTCATTAACCTAAC | 2160 |
| Db | 2246 | ATGTATTGAAAGCACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTCATTAACCTAAC | 2305 |
| Qy | 2161 | GACATTCTCAAACAGGGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTT | 2220 |
| Db | 2306 | GACATTCTCAAACAGGGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTT | 2365 |
| Qy | 2221 | GAGCAAATGAGGCAGCCAGATTCTATGGATGCCCTACAGGGCTTGTCTCCTCTAAAC | 2280 |
| Db | 2366 | GAGCAAATGAGGCAGCCAGATTCTATGGATGCTCACAGGGCTTGTCTCCTCTAAAC | 2425 |
| Qy | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTTAAAGAGTGTGAAATTATGTTCTGCAAAA | 2340 |
| Db | 2426 | CCTGCTCATCAACTAGGAAACCTCAGGCTTGAAGAGTGTGAAATTATGTTCTGCAAAA | 2485 |
| Qy | 2341 | AGGCCACTGTGGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTCAGAAC | 2400 |
| Db | 2486 | AGGCCACTGTGGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTCAGAAC | 2545 |
| Qy | 2401 | AATGAGATCATTTAAAAATGGGATGATTACGGCAAGATATGCTAACACTTCAAATT | 2460 |
| Db | 2546 | AATGAGATCATTTAAAAATGGGATGATTACGGCAAGATATGCTAACACTTCAAATT | 2605 |
| Qy | 2461 | ATTCGTATTATGAAAATATCTGGAAATCAAGGTCTGATCTCGAATGTTACCTTAT | 2520 |
| Db | 2606 | ATTCGTATTATGAAAATATCTGGAAATCAAGGTCTGATCTCGAATGTTACCTTAT | 2665 |
| Qy | 2521 | GGTTGTCTGTCAATCGGTGACTGTGTGGACTTATTGAGGTGGTGCAGAACACTCAC | 2580 |
| Db | 2666 | GGTTGTCTGTCAATCGGTGACTGTGTGGACTTATTGAGGTGGTGCAGAACACTCAC | 2725 |
| Qy | 2581 | ATTATGCAAATTCACTGCAAAGGCGGTTGAAAGGTGCACTGCAGTTAACAGCCACACA | 2640 |
| Db | 2726 | ATTATGCAAATTCACTGCAAAGGCGGTTGAAAGGTGCACTGCAGTTAACAGCCACACA | 2785 |
| Qy | 2641 | CTACATCAGTGGCTAAAGACAAGAACAAAGGAGAAATATGATGCAGCCATTGACCTG | 2700 |
| Db | 2786 | CTACATCAGTGGCTAAAGACAAGAACAAAGGAGAAATATGATGCAGCCATTGACCTG | 2845 |
| Qy | 2701 | TTTACACGTTCATGTGCTGGATACTGTGTAGCTACCTTCATTTGGAAATTGGAGATCGT | 2760 |
| Db | 2846 | TTTACACGTTCATGTGCTGGATACTGTGTAGCTACCTTCATTTGGAAATTGGAGATCGT | 2905 |
| Qy | 2761 | CACAATAGTAACATCATGGTAAAGACGATGGACAACTGTTCATATAGATTGGACAC | 2820 |
| Db | 2906 | CACAATAGTAACATCATGGTAAAGACGATGGACAACTGTTCATATAGATTGGACAC | 2965 |

| | | | |
|----|------|---|------|
| Qy | 2821 | TTTTGGATACAAGAAGAAAAATTGGTTATAAACGAGAACGTGTGCCATTGTTTG | 2880 |
| | | | |
| Db | 2966 | TTTTGGATACAAGAAGAAAAATTGGTTATAAACGAGAACGTGTGCCATTGTTTG | 3025 |
| | | | |
| Qy | 2881 | ACACAGGATTCTTAATAGTGATTAGTAAAGGAGGCCAAGAACATGCACAAAGACAAGAGAA | 2940 |
| | | | |
| Db | 3026 | ACACAGGATTCTTAATAGTGATTAGTAAAGGAGGCCAAGAACATGCACAAAGACAAGAGAA | 3085 |
| | | | |
| Qy | 2941 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGTTATCTAGCTATTGACAGCATGCCAAT | 3000 |
| | | | |
| Db | 3086 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGTTATCTAGCTATTGACAGCATGCCAAT | 3145 |
| | | | |
| Qy | 3001 | CTCTTCATAAATCTTCTCAATGATGCTGGCTCTGGAATGCCAGAACTACAATCTTT | 3060 |
| | | | |
| Db | 3146 | CTCTTCATAAATCTTCTCAATGATGCTGGCTCTGGAATGCCAGAACTACAATCTTT | 3205 |
| | | | |
| Qy | 3061 | GATGACATTGCATACATCGAAAGACCTAGCCTTAGATAAAACTGAGCAAGAGGTTTG | 3120 |
| | | | |
| Db | 3206 | GATGACATTGCATACATCGAAAGACCTAGCCTTAGATAAAACTGAGCAAGAGGTTTG | 3265 |
| | | | |
| Qy | 3121 | GAGTATTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT | 3180 |
| | | | |
| Db | 3266 | GAGTATTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT | 3325 |
| | | | |
| Qy | 3181 | TGGATCTCCACACAATTAAACAGCATGCATTGAACTG-AAAGATAACTGAGAAAATGAA | 3239 |
| | | | |
| Db | 3326 | TGGATCTCCACACAATTAAACAGCATGCATTGAACTGAAAAGATAACTGAGAAAATGAA | 3385 |
| | | | |
| Qy | 3240 | AGCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGCAAAGACCGATTGC | 3299 |
| | | | |
| Db | 3386 | AGCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGCAAAGACCGATTGC | 3445 |
| | | | |
| Qy | 3300 | ATAGGAATTGCACAATCCATGAACAGCATTAG-ATTTACAGCAAGAACAGAAATAAAATA | 3358 |
| | | | |
| Db | 3446 | ATAGGAATTGCACAATCCATGAACAGCATTAGAATTACAGCAAGAACAGAAATAAAATA | 3505 |
| | | | |
| Qy | 3359 | CTATATAATTAAATAATGTAACAGCAAACAGGGTTGATAGCACTTAAACTAGTCATT | 3418 |
| | | | |
| Db | 3506 | CTATATAATTAAATAATGTAACAGCAAACAGGGTTGATAGCACTTAAACTAGTCATT | 3565 |
| | | | |
| Qy | 3419 | TCAAAA 3424 | |
| | | | |
| Db | 3566 | TCAAAA 3571 | |

RESULT 13

AER29796

ID AER29796 standard; DNA; 3724 BP.

XX

AC AER29796;
XX
DT 11-JUN-2007 (revised)
DT 22-MAR-2007 (first entry)
XX
DE Breast cancer-associated gene SEQ ID NO:97.
XX
KW diagnosis; breast tumor; biochip; tumor marker; genetic marker;
KW biomarker; DNA detection; RNA detection; ds; PIK3CA.
XX
OS Homo sapiens.
XX
PN WO2007006911-A2.
XX
PD 18-JAN-2007.
XX
PF 05-JUL-2006; 2006WO-FR001593.
XX
PR 07-JUL-2005; 2005FR-00052087.
XX
PA (INMR) BIOMERIEUX SA.
XX
PI Krause A, Leissner P, Mougin B, Paye M;
XX
DR WPI; 2007-138577/14.
DR PC:NCBI; gi54792081.
DR PC_ENCPRO:NCBI; gi54792082.
XX
PT In vitro diagnosis of breast cancer comprises extracting biological material of biological sample, contacting biological material with specific reagents of target genes and determining target gene expression.
XX
PS Example 2; SEQ ID NO 97; 305pp; French.
XX
CC The invention describes a method for in vitro diagnosis of breast cancer in a patient susceptible to be affected by breast cancer, comprising: extracting nucleic acid from a biological sample taken from the patient; contacting the nucleic acid with at least 8 hybridization probes for detection of target genes chosen from SEQ ID Nos. 1 to 8 or 10 probes for detection of target genes chosen from SEQ ID Nos. 1, 2, 4, 6, 13, 14, 26, 69, 81 and 105; and determining the expression of the target genes. The invention also includes: a support, such as a biochip, comprising at least 8 or 10 hybridization probes mentioned above; and a diagnosis kit for breast cancer comprising the support. The method, biochip and kit are useful for the in vitro diagnosis of breast cancer. This sequence is a breast cancer-associated gene.
CC
CC Revised record issued on 11-JUN-2007 : Enhanced with precomputed information from BOND.

XX

SQ Sequence 3724 BP; 1242 A; 684 C; 763 G; 1035 T; 0 U; 0 Other;

Query Match 97.5%; Score 3339.6; DB 5; Length 3724;
 Best Local Similarity 98.8%;
 Matches 3385; Conservative 0; Mismatches 39; Indels 2; Gaps 2;

| | | | |
|----|-----|---|-----|
| Qy | 1 | AGGATCAGAACATGCCTCCAAGACCATCATCAGGTGAACGTGGGCATCCACTTGATG | 60 |
| | | | |
| Db | 146 | AGAATCAGAACATGCCTCCACGACCATCATCAGGTGAACGTGGGCATCCACTTGATG | 205 |
| | | | |
| Qy | 61 | CCCCCAAGAACATCCTAGTGGATGTTACTACCAAATGGAATGATAGTGTACCTTAGAATGC | 120 |
| | | | |
| Db | 206 | CCCCCAAGAACATCCTAGTGAATGTTACTACCAAATGGAATGATAGTGTACCTTAGAATGC | 265 |
| | | | |
| Qy | 121 | CTCCGTGAGGCTACATTAGTAACATAAACGATGAACATTAAAGAAGCAAGAAATAC | 180 |
| | | | |
| Db | 266 | CTCCGTGAGGCTACATTAATAACCATAAACGATGAACATTAAAGAAGCAAGAAATAC | 325 |
| | | | |
| Qy | 181 | CCTCTCCATCAACTTCTCAAGATGAATCTTCTACATTTCTGAAGTGTACCTCAAAGAA | 240 |
| | | | |
| Db | 326 | CCCCTCCATCAACTTCTCAAGATGAATCTTCTACATTTCTGAAGTGTACTCAAGAA | 385 |
| | | | |
| Qy | 241 | GCAGAAAGGGAGAATTTTGATGAAACAAGACGACTTGTGATCTCGGCTTTCAA | 300 |
| | | | |
| Db | 386 | GCAGAAAGGGAGAATTTTGATGAAACAAGACGACTTGTGACCTCGGCTTTCAA | 445 |
| | | | |
| Qy | 301 | CCATTTTAAAAGTAATTGAAACCACTAGGCCAACCGTGAAGAAAAGATCCTCAATCGAGAA | 360 |
| | | | |
| Db | 446 | CCCTTTTAAAAGTAATTGAAACCACTAGGCCAACCGTGAAGAAAAGATCCTCAATCGAGAA | 505 |
| | | | |
| Qy | 361 | ATTGGTTTGCTATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTA | 420 |
| | | | |
| Db | 506 | ATTGGTTTGCTATCGGCATGCCAGTGTGAAATTGATATGGTAAAGATCCAGAAGTA | 565 |
| | | | |
| Qy | 421 | CAGGACTCCGAAGAAATATTCTTAATGTTGTAAGAAGCTGTGGATCTTAGGGATCTT | 480 |
| | | | |
| Db | 566 | CAGGACTCCGAAGAAATATTCTGAACGTTGTAAGAAGCTGTGGATCTTAGGGACCTC | 625 |
| | | | |
| Qy | 481 | AATTACACCTCATAGTAGAGCAATGTATGCTATCCGCCACATGTAGAATCTCACCAAGAG | 540 |
| | | | |
| Db | 626 | AATTACACCTCATAGTAGAGCAATGTATGCTATCCTCCAAATGTAGAATCTCACCAAGAA | 685 |
| | | | |
| Qy | 541 | CTGCCAAAGCACATATATAATAAAATTGGATAGAGGCCAATAATAGTGGTGAATTGGGTA | 600 |
| | | | |
| Db | 686 | TTGCCAAAGCACATATATAATAAAATTAGATAAAGGCCAATAATAGTGGTGAATCTGGGTA | 745 |
| | | | |
| Qy | 601 | ATAGTTCTCCAAATAATGACAAGCAGAAGTATACTCTGAAAATCAACCATGACTGTG | 660 |
| | | | |

| | | | |
|----|------|--|------|
| Db | 746 | ATAGTTCTCAAATAATGACAAGCAGAAGTATACTCTGAAAATCAACCATGACTGTGTA | 805 |
| Qy | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTGCTATCATCT | 720 |
| Db | 806 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTCGAAGTATGTTGCTATCCTCT | 865 |
| Qy | 721 | GAACAAATTAAAACCTGTGTTTAGAATATCAGGGCAAGTACATTTAAAAGTGTGGA | 780 |
| Db | 866 | GAACAACTAAAACCTGTGTTTAGAATATCAGGGCAAGTATTTAAAAGTGTGGA | 925 |
| Qy | 781 | TGTGATGAATACCTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATAAGAAGCTGT | 840 |
| Db | 926 | TGTGATGAATACCTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATAAGAAGCTGT | 985 |
| Qy | 841 | ATAATGCTGGGAGGATGCCAATTGAAAGATGATGGCTAAAGAAAGCCTTATTCTCAA | 900 |
| Db | 986 | ATAATGCTGGGAGGATGCCAATTGATGTTGATGCCAAAGAAAGCCTTATTCTCAA | 1045 |
| Qy | 901 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 960 |
| Db | 1046 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 1105 |
| Qy | 961 | TATATGAATGGAGAAACATCTACAAAATCCCTTGGTTATAATAGAGCACTCAGAATA | 1020 |
| Db | 1106 | TATATGAATGGAGAAACATCTACAAAATCCCTTGGTTATAATAGTCAGCTACAGAATA | 1165 |
| Qy | 1021 | AAAATTCTTGTGCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTATGTT | 1080 |
| Db | 1166 | AAAATTCTTGTGCAACCTACGTGAATGTAATATTGAGACATTGATAAGATCTATGTT | 1225 |
| Qy | 1081 | CGAACAGGTATCTACCATGGAGGAGAACCTTATGTGACAATGTGAAACACTCAAAGAGTA | 1140 |
| Db | 1226 | CGAACAGGTATCTACCATGGAGGAGAACCTTATGTGACAATGTGAAACACTCAAAGAGTA | 1285 |
| Qy | 1141 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATATACATTCTGTACTT | 1200 |
| Db | 1286 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATATACATTCTGTACTT | 1345 |
| Qy | 1201 | CCTCGTGTGCTCGACTTGCCTTCCATTGCTCTGTTAAAGGCCGAAAGGGTGTAAA | 1260 |
| Db | 1346 | CCTCGTGTGCTCGACTTGCCTTCCATTGCTCTGTTAAAGGCCGAAAGGGTGTAAA | 1405 |
| Qy | 1261 | GAGGAACACTGTCCATTGGCATGGGGAAATAAAACTTGTGATTACACAGACACTCTA | 1320 |
| Db | 1406 | GAGGAACACTGTCCATTGGCATGGGGAAATAAAACTTGTGATTACACAGACACTCTA | 1465 |
| Qy | 1321 | GTATCTGGAAAAATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| Db | 1466 | GTATCTGGAAAAATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTG | 1525 |

| | | | |
|----|------|--|------|
| Qy | 1381 | AACCCTATTGGTGTACTGGATCAAATCCAATAAAGAAA CTCCATGCTTAGAGTTGGAG | 1440 |
| Db | 1526 | AACCCTATTGGTGTACTGGATCAAATCCAATAAAGAAA CTCCATGCTTAGAGTTGGAG | 1585 |
| Qy | 1441 | TTTGACTGGTTCAGCAGTGGTAAAGTCCCAGATATGTCAGTGAAGAGCATGCC | 1500 |
| Db | 1586 | TTTGACTGGTTCAGCAGTGGTAAAGTCCCAGATATGTCAGTGAAGAGCATGCC | 1645 |
| Qy | 1501 | AATTGGTCTGTATCCCAGAGAACAGGATTAGCTATTCCCACGCAGGACTGAGTAACAGA | 1560 |
| Db | 1646 | AATTGGTCTGTATCCCAGAGAACAGGATTAGCTATTCCCACGCAGGACTGAGTAACAGA | 1705 |
| Qy | 1561 | CTAGCTAGAGACAATGAATTAGGGAAAATGACAAAGAACAGCTCAAAGCAATTCTACA | 1620 |
| Db | 1706 | CTAGCTAGAGACAATGAATTAGGGAAAATGACAAAGAACAGCTCAAAGCAATTCTACA | 1765 |
| Qy | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAGATTTCTATGGAGTCACAGACAC | 1680 |
| Db | 1766 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAGATTTCTATGGAGTCACAGACAC | 1825 |
| Qy | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGTCTGTAAATGGAATTCT | 1740 |
| Db | 1826 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGTCTGTAAATGGAATTCT | 1885 |
| Qy | 1741 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAGATTGGCCTCCAATCAAACCTGAA | 1800 |
| Db | 1886 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAGATTGGCCTCCAATCAAACCTGAA | 1945 |
| Qy | 1801 | CAGGCTATGGAACTCTGGACTGTAATTACCCAGATCCATGGTCGAGGTTTGCTGTT | 1860 |
| Db | 1946 | CAGGCTATGGAACTCTGGACTGTAATTACCCAGATCCATGGTCGAGGTTTGCTGTT | 2005 |
| Qy | 1861 | CGGTGCTTGGAAAAATATTAACAGATGACAAACTTCTCAGTATTAAATTCTAGCTAGTA | 1920 |
| Db | 2006 | CGGTGCTTGGAAAAATATTAACAGATGACAAACTTCTCAGTATTAAATTCTAGCTAGTA | 2065 |
| Qy | 1921 | CAGGTCTAAATATGAACAAATTGGATAACTTGCTTGTGAGATTAACTGAAGAAA | 1980 |
| Db | 2066 | CAGGTCTAAATATGAACAAATTGGATAACTTGCTTGTGAGATTAACTGAAGAAA | 2125 |
| Qy | 1981 | GCATTGACTAACAGGATTGGGACTTTCTTTGGCATTAAATCTGAGATGCAC | 2040 |
| Db | 2126 | GCATTGACTAACAGGATTGGGACTTTCTTTGGCATTAAATCTGAGATGCAC | 2185 |
| Qy | 2041 | AATAAAACAGTTAGCCAGAGGTTGGCCTGCTTTGGAGTCCTATTGCGTGCATGTGGG | 2100 |
| Db | 2186 | AATAAAACAGTTAGCCAGAGGTTGGCCTGCTTTGGAGTCCTATTGCGTGCATGTGGG | 2245 |

| | | | |
|----|------|---|------|
| Qy | 2101 | ATGTATTGAAAGCACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTCATTAACCTAAC | 2160 |
| Db | 2246 | ATGTATTGAAAGCACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTCATTAACCTAAC | 2305 |
| Qy | 2161 | GACATTCTCAAACAGGGAGAGGAAGGTGAAACACAAAAGGTACAGATGAAGTTTAGTT | 2220 |
| Db | 2306 | GACATTCTCAAACAGGGAGAAGAAGGTGAAACACAAAAGGTACAGATGAAGTTTAGTT | 2365 |
| Qy | 2221 | GAGCAAATGAGGCACCAGATTCTATGGATGCCCTACAGGGCTTGCTCTCCTCTAAAC | 2280 |
| Db | 2366 | GAGCAAATGAGGCACCAGATTCTATGGATGCTCACAGGGCTTCTGCTCTCCTCTAAAC | 2425 |
| Qy | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTAAAGAGTGTGCAATTATGCTCTGCAAAA | 2340 |
| Db | 2426 | CCTGCTCATCAACTAGGAAACCTCAGGCTTGAAGAGTGTGCAATTATGCTCTGCAAAA | 2485 |
| Qy | 2341 | AGGCCACTGTGGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTCAGAAC | 2400 |
| Db | 2486 | AGGCCACTGTGGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTCAGAAC | 2545 |
| Qy | 2401 | AATGAGATCATTTAAAAATGGGGATGATTACGGCAAGATATGCTAACACTTCAAATT | 2460 |
| Db | 2546 | AATGAGATCATTTAAAAATGGGGATGATTACGGCAAGATATGCTAACACTTCAAATT | 2605 |
| Qy | 2461 | ATTCGTATTATGAAAATATCTGGAAAATCAAGGTCTGATCTCGAATGTTACCTTAT | 2520 |
| Db | 2606 | ATTCGTATTATGAAAATATCTGGAAAATCAAGGTCTGATCTCGAATGTTACCTTAT | 2665 |
| Qy | 2521 | GGTTGTCTGCAATCGGTGACTGTGGACTTATTGAGGTGGTGCAGAATTCTCACACT | 2580 |
| Db | 2666 | GGTTGTCTGCAATCGGTGACTGTGGACTTATTGAGGTGGTGCAGAATTCTCACACT | 2725 |
| Qy | 2581 | ATTATGCAAATTCACTGCAAAGGCGGCTTGAAGGTGCACTGCAGTTCAACAGCCACACA | 2640 |
| Db | 2726 | ATTATGCAAATTCACTGCAAAGGCGGCTTGAAGGTGCACTGCAGTTCAACAGCCACACA | 2785 |
| Qy | 2641 | CTACATCAGTGGCTCAAAGACAAGAACAAAGGAGAAATATGATGCAGCCATTGACCTG | 2700 |
| Db | 2786 | CTACATCAGTGGCTCAAAGACAAGAACAAAGGAGAAATATGATGCAGCCATTGACCTG | 2845 |
| Qy | 2701 | TTTACACGTTCATGTGCTGGATACTGTGTAGCTACCTTCATTTGGAAATTGGAGATCGT | 2760 |
| Db | 2846 | TTTACACGTTCATGTGCTGGATACTGTGTAGCTACCTTCATTTGGAAATTGGAGATCGT | 2905 |
| Qy | 2761 | CACAATAGTAACATCATGGTAAAGACGATGGACAACTGTTCATATAGATTGGACAC | 2820 |
| Db | 2906 | CACAATAGTAACATCATGGTAAAGACGATGGACAACTGTTCATATAGATTGGACAC | 2965 |
| Qy | 2821 | TTTTGGATCACAAGAAGAAAAATTGGTTATAACGAGAACGTGTGCCATTGTTTG | 2880 |

| | | | |
|----|------|--|------|
| Db | 2966 | TTTTGGATCACAGAAGAAAAATTGGTTATAACGAGAACGTGCGCATTTGTTTG | 3025 |
| Qy | 2881 | ACACAGGATTCTTAATAGTGATTAGTAAAGGAGGCCAAGAACATGCACAAAGACAAGAGAA | 2940 |
| Db | 3026 | ACACAGGATTCTTAATAGTGATTAGTAAAGGAGGCCAAGAACATGCACAAAGACAAGAGAA | 3085 |
| Qy | 2941 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACACAGATGCCAAT | 3000 |
| Db | 3086 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACACAGATGCCAAT | 3145 |
| Qy | 3001 | CTCTTCATAAAATCTTCTCAATGATGCTTGGCTTGGAAATGCCAGAACTACAATCTTT | 3060 |
| Db | 3146 | CTCTTCATAAAATCTTCTCAATGATGCTTGGCTTGGAAATGCCAGAACTACAATCTTT | 3205 |
| Qy | 3061 | GATGACATTGCATACATTGAAAGACCCTAGGCTTAGATAAAAAGACTGAGCAAGAGGCTTTG | 3120 |
| Db | 3206 | GATGACATTGCATACATTGAAAGACCCTAGGCTTAGATAAAAAGACTGAGCAAGAGGCTTTG | 3265 |
| Qy | 3121 | GAGTATTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT | 3180 |
| Db | 3266 | GAGTATTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT | 3325 |
| Qy | 3181 | TGGATCTTCCACACAATTAAACAGCATGCATTGAACTG-AAAGATAACTGAGAAAATGAA | 3239 |
| Db | 3326 | TGGATCTTCCACACAATTAAACAGCATGCATTGAACTGAAAAGATAACTGAGAAAATGAA | 3385 |
| Qy | 3240 | AGCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGCAAAGACCGATTGC | 3299 |
| Db | 3386 | AGCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGCAAAGACCGATTGC | 3445 |
| Qy | 3300 | ATAGGAATTGCACAATCCATGAACAGCATTAG-ATTTACAGCAAGAACAGAAATAAAATA | 3358 |
| Db | 3446 | ATAGGAATTGCACAATCCATGAACAGCATTAGAATTACAGCAAGAACAGAAATAAAATA | 3505 |
| Qy | 3359 | CTATATAATTAAATAATGTAACAGCAAACAGGGTTGATAGCACTTAAACTAGTCATT | 3418 |
| Db | 3506 | CTATATAATTAAATAATGTAACAGCAAACAGGGTTGATAGCACTTAAACTAGTCATT | 3565 |
| Qy | 3419 | TCAAAA 3424 | |
| Db | 3566 | TCAAAA 3571 | |

RESULT 14

ARV60468

ID ARV60468 standard; cDNA; 3724 BP.

xx

AC ARV60468;

XX
DT 24-JUL-2008 (first entry)
XX
DE Human PIK3CA polynucleotide, SEQ ID 30.
XX
KW mutation; dna microarray; prognosis; diagnostic test; therapeutic;
KW non-small-cell lung cancer; tumor; cytostatic; ss; gene;
KW phosphoinositide-3-kinase, catalytic, alpha polypeptide; PIK3CA.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT CDS 158..3364
FT /*tag= a
FT /product
XX
PN WO2008061213-A2.
XX
PD 22-MAY-2008.
XX
PF 15-NOV-2007; 2007WO-US084888.
XX
PR 16-NOV-2006; 2006US-0866103P.
PR 10-JUL-2007; 2007US-0948818P.
XX
PA (GETH) GENENTECH INC.
XX
PI Seshagiri S, Peters B, Kan Z;
XX
DR WPI; 2008-G25985/39.
DR P-PSDB; ARV60505.
DR PC:NCBI; gi54792081.
DR PC_ENCPRO:NCBI; gi54792082.
XX
PT New isolated polynucleotide comprises PRO polynucleotide or fragment
PT comprising a nucleotide variation, useful for detecting nucleotide
PT variations for diagnosing and treating tumors.
XX
PS Claim 2; SEQ ID NO 30; 55pp; English.
XX
CC The present invention relates to a novel isolated polynucleotide
CC comprising a PRO polynucleotide or its fragment. The PRO polynucleotide
CC or its fragment comprises a nucleotide variation at a nucleotide position
CC given in the specification. A nucleotide variation refers to a change in
CC a nucleotide sequence (e.g., an insertion, deletion, inversion, or
CC substitution of one or more nucleotides, such as a single nucleotide
CC polymorphism (SNP)) relative to a reference sequence (e.g., a wild type
CC sequence). A nucleotide variation may be a somatic mutation or a germline
CC polymorphism. The present invention provides: (i) an allele-specific

CC oligonucleotide that hybridizes to a region of a PRO polynucleotide
 CC comprising a nucleotide variation at a nucleotide position, or its
 CC complement; (ii) a kit comprising the oligonucleotide and an enzyme;
 CC (iii) a microarray comprising the oligonucleotide; (iv) a method for
 detecting the absence or presence of the variation at a nucleotide
 CC position; (v) a method for amplifying a nucleic acid comprising the
 CC nucleotide variation; (vi) a method for determining the genotype of a
 CC biological sample (e.g. non-small cell lung carcinoma sample) from a
 CC mammal; (vii) a method for classifying a tumor in the mammal; and (viii)
 CC a method for predicting whether a tumor (e.g. non-small cell lung
 CC carcinoma) will respond to a therapeutic agent that targets a PRO or a
 CC PRO polynucleotide, comprises determining whether the tumor comprises a
 CC variation in a PRO or PRO polynucleotide, where the presence of a
 CC variation indicates that the tumor will respond to the therapeutic agent.
 CC The method of detecting the absence or presence of the nucleotide
 CC variation comprises: (a) contacting the suspected nucleic acid with the
 CC allele-specific oligonucleotide that is specific for the nucleotide
 CC variation, under conditions suitable for hybridization of the
 CC oligonucleotide to the nucleic acid; and (b) detecting the absence or
 CC presence of allele-specific hybridization. The method of amplifying the
 CC nucleic acid comprising the nucleotide variation comprises: (a)
 CC contacting the nucleic acid with a primer that hybridizes to the nucleic
 CC acid at 3' of the nucleotide variation; and (b) extending the primer to
 CC generate an amplification product comprising the nucleotide variation.
 CC The isolated polynucleotide is used for detecting nucleotide variations.
 CC The methods are used for diagnosing and treating tumors. The present
 CC sequence is a human PRO polynucleotide sequence used in the invention.

CC

CC Revised record issued on 18-JUN-2008 : Enhanced with precomputed
 CC information from BOND.

XX

SQ Sequence 3724 BP; 1242 A; 684 C; 763 G; 1035 T; 0 U; 0 Other;

| | | | | | | | | | |
|-----------------------|-------|--------------|--------|------------|----|--------|------|------|---|
| Query Match | 97.5% | Score | 3339.6 | DB | 7 | Length | 3724 | | |
| Best Local Similarity | 98.8% | | | | | | | | |
| Matches | 3385 | Conservative | 0 | Mismatches | 39 | Indels | 2 | Gaps | 2 |

Qy 1 AGGATCAGAACAAATGCCTCCAAGACCATCATCAGGTGAAGTGTGGGCATCCACTTGATG 60
 |||||||.....|||||||.....|||||||.....|||||||.....|||||||.....|||||||.....

Db 146 AGAACATCAGAACAAATGCCTCCACGACCATCATCAGGTGAAGTGTGGGCATCCACTTGATG 205

Qy 61 CCCCAAGAACATCCTAGTGGATGTTACTACCAAATGGAATGATAGTGTACTTAAAGATGC 120
 |||||||.....|||||||.....|||||||.....|||||||.....|||||||.....|||||||.....

Db 206 CCCCAAGAACATCCTAGTGGATGTTACTACCAAATGGAATGATAGTGTACTTAAAGATGC 265

Qy 121 CTCCGTGAGGCTACATTAGTAACATAAAGCATGAACATTTAAAGAAGCAAGAAAATAC 180
 |||||||.....|||||||.....|||||||.....|||||||.....|||||||.....|||||||.....

Db 266 CTCCGTGAGGCTACATTAAATAACCATAAAAGCATGAACATTTAAAGAAGCAAGAAAATAC 325

| | | | |
|----|-----|--|------|
| Qy | 181 | CCTCTCCATCAACTTCTCAAGATGAATCTTCTACATTTCTGTAAGTGTACCCAAGAA | 240 |
| | | | |
| Db | 326 | CCCCTCCATCAACTTCTCAAGATGAATCTTCTACATTTCTGTAAGTGTACTCAAGAA | 385 |
| | | | |
| Qy | 241 | GCAGAAAGGGAGAATTGGATGAAACAAGACGACTTGTGATCTCGGCTTTCAA | 300 |
| | | | |
| Db | 386 | GCAGAAAGGGAGAATTGGATGAAACAAGACGACTTGTGACCTCGGCTTTCAA | 445 |
| | | | |
| Qy | 301 | CCATTTAAAAGTAATTGAAACAGTAGGCCAACCGTGAAGAAAAGATCCTCAATCGAGAA | 360 |
| | | | |
| Db | 446 | CCCTTTAAAAGTAATTGAAACAGTAGGCCAACCGTGAAGAAAAGATCCTCAATCGAGAA | 505 |
| | | | |
| Qy | 361 | ATGGTTTGCTATCGGCATGCCAGTGTGCAATTGATATGGTAAAGATCCTGAAGTA | 420 |
| | | | |
| Db | 506 | ATGGTTTGCTATCGGCATGCCAGTGTGCAATTGATATGGTAAAGATCCAGAAGTA | 565 |
| | | | |
| Qy | 421 | CAGGACTTCCGAGAAATTCTTAATGTTGTAAGAAGCTGGATCTTAGGGATCTT | 480 |
| | | | |
| Db | 566 | CAGGACTTCCGAGAAATTCTGAACGTTGTAAGAAGCTGGATCTTAGGGACCTC | 625 |
| | | | |
| Qy | 481 | AATTCACCTCATAGTAGAGCAATGTATGCTATCGCCACATGTAGAATCTCACCAGAG | 540 |
| | | | |
| Db | 626 | AATTCACCTCATAGTAGAGCAATGTATGCTATCCTCAAATGTAGAATCTCACCAGAA | 685 |
| | | | |
| Qy | 541 | CTGCCAAAGCACATATATAAAATTGGATAGAGGCCAATAATAGTGGTGTAGGGTA | 600 |
| | | | |
| Db | 686 | TTGCCAAAGCACATATATAAAATTGATAAGGCCAATAATAGTGGTGTAGGGTA | 745 |
| | | | |
| Qy | 601 | ATAGTTCTCAAATAATGACAAGCAGAAGTATACTCTGAAAATCACCATGACTGTGTG | 660 |
| | | | |
| Db | 746 | ATAGTTCTCAAATAATGACAAGCAGAAGTATACTCTGAAAATCACCATGACTGTGTG | 805 |
| | | | |
| Qy | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTGCTATCATCT | 720 |
| | | | |
| Db | 806 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTCGAAGTATGTTGCTATCCTCT | 865 |
| | | | |
| Qy | 721 | GAACAATTAAAACCTGTGTTTAGAATATCAGGGCAAGTACATTTAAAAGTGTGTGGA | 780 |
| | | | |
| Db | 866 | GAACAACAAAACCTGTGTTTAGAATATCAGGGCAAGTATTTAAAAGTGTGTGGA | 925 |
| | | | |
| Qy | 781 | TGTGATGAATACCTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATATAAGAAGCTGT | 840 |
| | | | |
| Db | 926 | TGTGATGAATACCTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATATAAGAAGCTGT | 985 |
| | | | |
| Qy | 841 | ATAATGCTGGGAGGATGCCAATTGAGATGATGGCTAAAGAAAGCCTTTATTCTCAA | 900 |
| | | | |
| Db | 986 | ATAATGCTGGGAGGATGCCAATTGATGGCTAAAGAAAGCCTTTATTCTCAA | 1045 |
| | | | |
| Qy | 901 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTTCCACAGCTACACCA | 960 |
| | | | |

| | | | |
|----|------|---|------|
| Db | 1046 | CTGCCAATGGACTGTTTACAATGCCATTCCAGACGCATTCCACAGCTACACCA | 1105 |
| Qy | 961 | TATATGAATGGAGAACATCTACAAAATCCCTTGGGTATAATAGAGCACTCAGAATA | 1020 |
| Db | 1106 | TATATGAATGGAGAACATCTACAAAATCCCTTGGGTATAATAGTCACTCAGAATA | 1165 |
| Qy | 1021 | AAATTCTTGCAACCTACGTGAATCTAAATATCGAGACATTGACAAGATTATGTT | 1080 |
| Db | 1166 | AAATTCTTGCAACCTACGTGAATGTAATATCGAGACATTGATAAGATCTATGTT | 1225 |
| Qy | 1081 | CGAACAGGTATCTACCATGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1140 |
| Db | 1226 | CGAACAGGTATCTACCATGGAGGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1285 |
| Qy | 1141 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATACATTCTGATCTT | 1200 |
| Db | 1286 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATACATTCTGATCTT | 1345 |
| Qy | 1201 | CCTCGTGTGTCGACTTGCCTTCCATTGCTCTGTAAAGGCCGAAAGGGTGTCTAA | 1260 |
| Db | 1346 | CCTCGTGTGTCGACTTGCCTTCCATTGCTCTGTAAAGGCCGAAAGGGTGTCTAA | 1405 |
| Qy | 1261 | GAGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTA | 1320 |
| Db | 1406 | GAGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTA | 1465 |
| Qy | 1321 | GTATCTGAAAAATGGCTTGAATCTTGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| Db | 1466 | GTATCTGAAAAATGGCTTGAATCTTGCCAGTACCTCATGGATTAGAAGATTGCTG | 1525 |
| Qy | 1381 | AACCCTATTGGTGTACTGGATCAAATCCAAATAAGAAACTCCATGCTTAGAGTTGGAG | 1440 |
| Db | 1526 | AACCCTATTGGTGTACTGGATCAAATCCAAATAAGAAACTCCATGCTTAGAGTTGGAG | 1585 |
| Qy | 1441 | TTGACTGGTCAGCAGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |
| Db | 1586 | TTGACTGGTCAGCAGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1645 |
| Qy | 1501 | AATTGGTCTGTATCCCGAGAACGAGGATTAGCTATTCCCACGCAGGACTGAGTAACAGA | 1560 |
| Db | 1646 | AATTGGTCTGTATCCCGAGAACGAGGATTAGCTATTCCCACGCAGGACTGAGTAACAGA | 1705 |
| Qy | 1561 | CTAGCTAGAGACAATGAATTAAGGGAAATGACAAAGAACAGCTCAAAGCAATTCTACA | 1620 |
| Db | 1706 | CTAGCTAGAGACAATGAATTAAGGGAAATGACAAAGAACAGCTCAAAGCAATTCTACA | 1765 |
| Qy | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAGATTCTATGGAGTCACAGACAC | 1680 |

| | | | |
|----|------|--|------|
| Db | 1766 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAGATTCTATGGAGTCACAGACAC | 1825 |
| Qy | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGCTGTAAATGGAATTCT | 1740 |
| Db | 1826 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGCTGTAAATGGAATTCT | 1885 |
| Qy | 1741 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAAGATTGCCCTCCAATCAAACCTGAA | 1800 |
| Db | 1886 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAAGATTGCCCTCCAATCAAACCTGAA | 1945 |
| Qy | 1801 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCCATGGTCGAGGTTTGCTGTT | 1860 |
| Db | 1946 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCCATGGTCGAGGTTTGCTGTT | 2005 |
| Qy | 1861 | CGGTGCTTGGAAAAATTTAACAGATGACAAACTTCTCAGTTAACAGCTAGTA | 1920 |
| Db | 2006 | CGGTGCTTGGAAAAATTTAACAGATGACAAACTTCTCAGTTAACAGCTAGTA | 2065 |
| Qy | 1921 | CAGGTCTAAACATATGAAACATATTGGATAACTGCTGTGAGATTAACTGAAGAAA | 1980 |
| Db | 2066 | CAGGTCTAAACATATGAAACATATTGGATAACTGCTGTGAGATTAACTGAAGAAA | 2125 |
| Qy | 1981 | GCATTGACTAATCAAAGGATTGGCACTTTCTTTGGCATTTAAATCTGAGATGCAC | 2040 |
| Db | 2126 | GCATTGACTAATCAAAGGATTGGCACTTTCTTTGGCATTTAAATCTGAGATGCAC | 2185 |
| Qy | 2041 | AATAAAACAGTTAGCCAGAGGTTGGCCTGCTTTGGAGTCCTATTGCGATGTGGG | 2100 |
| Db | 2186 | AATAAAACAGTTAGCCAGAGGTTGGCCTGCTTTGGAGTCCTATTGCGATGTGGG | 2245 |
| Qy | 2101 | ATGTATTGAAAGCACCTGAATAGGCAAGTCGAGGAATGGAAAGCTCATTAACTTA | 2160 |
| Db | 2246 | ATGTATTGAAAGCACCTGAATAGGCAAGTCGAGGAATGGAAAGCTCATTAACTTA | 2305 |
| Qy | 2161 | GACATTCTCAAACAGGAGAGGAAGGATGAAACACAAAGGTACAGATGAAGTTTAGTT | 2220 |
| Db | 2306 | GACATTCTCAAACAGGAGAGGAAGGATGAAACACAAAGGTACAGATGAAGTTTAGTT | 2365 |
| Qy | 2221 | GAGCAAATGAGGCACCAGATTCTATGGATGCCCTACAGGGCTGCTCTCTAAAC | 2280 |
| Db | 2366 | GAGCAAATGAGGCACCAGATTCTATGGATGCTCACAGGGCTTCTGCTCTCTAAAC | 2425 |
| Qy | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTAAAGAGTGTGCAATTATGCTCTGCAAAA | 2340 |
| Db | 2426 | CCTGCTCATCAACTAGGAAACCTCAGGCTGAGAGTGTGCAATTATGCTCTGCAAAA | 2485 |
| Qy | 2341 | AGGCCACTGTGGTTGAATTGGAGAACCCAGACATCATGTCAGAGTTACTGTTCAGAAC | 2400 |
| Db | 2486 | AGGCCACTGTGGTTGAATTGGAGAACCCAGACATCATGTCAGAGTTACTGTTCAGAAC | 2545 |

| | | | |
|----|------|---|------|
| Qy | 2401 | AATGAGATCATCTTAAAAATGGGATGATTACGGCAAGATATGCTAACACTTCAAATT | 2460 |
| Db | 2546 | AATGAGATCATCTTAAAAATGGGATGATTACGGCAAGATATGCTAACACTTCAAATT | 2605 |
| Qy | 2461 | ATTCGTATTATGGAAAATATCTGGAAAATCAAGGTCTGATCTCGAATGTTACCTTAT | 2520 |
| Db | 2606 | ATTCGTATTATGGAAAATATCTGGAAAATCAAGGTCTGATCTCGAATGTTACCTTAT | 2665 |
| Qy | 2521 | GGTTGTCTGTCAATCGGTGACTGTGTTGGACTTATTGAGGTGGTGGCGAAATTCTCACACT | 2580 |
| Db | 2666 | GGTTGTCTGTCAATCGGTGACTGTGTTGGACTTATTGAGGTGGTGGCGAAATTCTCACACT | 2725 |
| Qy | 2581 | ATTATGCAAATTCAAGTGCAAAGCGGCTTGAAAGGTGCACTGCAGTTAACAGCCACACA | 2640 |
| Db | 2726 | ATTATGCAAATTCAAGTGCAAAGCGGCTTGAAAGGTGCACTGCAGTTAACAGCCACACA | 2785 |
| Qy | 2641 | CTACATCAGTGGCTCAAAGACAAGAACAAAGGAGAAAATATGATGCAAGCCATTGACCTG | 2700 |
| Db | 2786 | CTACATCAGTGGCTCAAAGACAAGAACAAAGGAGAAAATATGATGCAAGCCATTGACCTG | 2845 |
| Qy | 2701 | TTTACACGTTCATGTGCTGGATACTGTGTAGCTACCTTCATTTGGAAATTGGAGATCGT | 2760 |
| Db | 2846 | TTTACACGTTCATGTGCTGGATACTGTGTAGCTACCTTCATTTGGAAATTGGAGATCGT | 2905 |
| Qy | 2761 | CACAATAGTAACATCATGGTGAAGACGATGGACAACTGTTCATATAGATTGGACAC | 2820 |
| Db | 2906 | CACAATAGTAACATCATGGTGAAGACGATGGACAACTGTTCATATAGATTGGACAC | 2965 |
| Qy | 2821 | TTTTGGATCACAAGAAGAAAAATTGGTTATAACGAGAACGTGTGCCATTGTTTG | 2880 |
| Db | 2966 | TTTTGGATCACAAGAAGAAAAATTGGTTATAACGAGAACGTGTGCCATTGTTTG | 3025 |
| Qy | 2881 | ACACAGGATTCTTAATAGTGATTAGTAAAGGAGGCCAAGAACATGCACAAAGACAAGAGAA | 2940 |
| Db | 3026 | ACACAGGATTCTTAATAGTGATTAGTAAAGGAGGCCAAGAACATGCACAAAGACAAGAGAA | 3085 |
| Qy | 2941 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGCTATCGACAGCATGCCAAT | 3000 |
| Db | 3086 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGCTATCGACAGCATGCCAAT | 3145 |
| Qy | 3001 | CTCTTCATAAAATCTTCTCAATGATGCTGGCTCTGGAAATGCCAGAACTACAATCTTT | 3060 |
| Db | 3146 | CTCTTCATAAAATCTTCTCAATGATGCTGGCTCTGGAAATGCCAGAACTACAATCTTT | 3205 |
| Qy | 3061 | GATGACATTGCATACATTGAAAGACCTAGCCTAGATAAAACTGAGCAAGAGGCTTTG | 3120 |
| Db | 3206 | GATGACATTGCATACATTGAAAGACCTAGCCTAGATAAAACTGAGCAAGAGGCTTTG | 3265 |

| | | |
|----|---|----------|
| Qy | 3121 GAGTATTCATGAAACAAATGAATGATGCACATCATGGGGCTGGACAACAAAAATGGAT | 3180 |
| Db | 3266 GAGTATTCATGAAACAAATGAATGATGCACATCATGGGGCTGGACAACAAAAATGGAT | 3325 |
| Qy | 3181 TGGATCTCCACACAATTAAACAGCATGCATTGAAGT-G-AAGATAACTGAGAAAATGAA | 3239 |
| Db | 3326 TGGATCTCCACACAATTAAACAGCATGCATTGAAGT-GAAAAGATAACTGAGAAAATGAA | 3385 |
| Qy | 3240 AGCTCACTCTGGATTCCACACTGCAGTGTAAATAACTCTCAGCAGGCAAAGACCGATTGC | 3299 |
| Db | 3386 AGCTCACTCTGGATTCCACACTGCAGTGTAAATAACTCTCAGCAGGCAAAGACCGATTGC | 3445 |
| Qy | 3300 ATAGGAATTGCACAATCCATGAACAGCATTAG-ATTACAGCAAGAACAGAAATAAAATA | 3358 |
| Db | 3446 ATAGGAATTGCACAATCCATGAACAGCATTAGAATTACAGCAAGAACAGAAATAAAATA | 3505 |
| Qy | 3359 CTATATAATTAAATAATGTAACGCACAGGGTTGATAGCACTTAAACTAGTCATT | 3418 |
| Db | 3506 CTATATAATTAAATAATGTAACGCACAGGGTTGATAGCACTTAAACTAGTCATT | 3565 |
| Qy | 3419 TCAAAA 3424 | |
| Db | 3566 TCAAAA 3571 | |

RESULT 15

ARW65283

ID ARW65283 standard; cDNA; 3724 BP.

XX

AC ARW65283;

XX

DT 07-AUG-2008 (first entry)

XX

DE Human PIK3CA cDNA, SEQ ID 53.

XX

KW tumor marker; prognosis; diagnostic test; cancer; ss; gene; PIK3CA.

XX

OS Homo sapiens.

XX

PN WO2008070325-A2.

XX

PD 12-JUN-2008.

XX

PF 24-OCT-2007; 2007WO-US082397.

XX

PR 26-OCT-2006; 2006US-0863106P.

PR 14-MAY-2007; 2007US-0917814P.

XX

PA (GETH) GENENTECH INC.

XX
PI Kan Z, Kenski DM, Peters B, Seshagiri S;
XX

DR WPI; 2008-G69314/42.

DR P-PSDB; ARW65361.

DR PC:NCBI; gi54792081.

DR PC_ENCPRO:NCBI; gi54792082.
XX

PT New polynucleotide, useful for determining the genotype of a sample from
PT a mammal, for classifying a tumor in a mammal or for predicting whether a
PT tumor will respond to a therapeutic agent that targets a PRO polypeptide
PT or polynucleotide.
XX

PS Claim 2; SEQ ID NO 53; 98pp; English.
XX

CC The present invention relates to novel isolated polynucleotides. An
CC isolated polynucleotide comprises: (a) a PRO polynucleotide or its
CC fragment that is at least about 10 nucleotides in length or that
comprises a nucleotide variation at a nucleotide position given in the
CC specification, or (b) its complement. These variations provide biomarkers
CC for cancer and/or predisposition to tumorigenesis or tumor promotion. The
present invention provides: (1) a kit comprising the oligonucleotide and
CC at least one enzyme; (2) a microarray comprising the oligonucleotide; (3)
CC a method for detecting the absence or presence of a nucleotide variation
CC at a nucleotide position given in the specification, which comprises
CC contacting the nucleic acid suspected of comprising the nucleotide
CC variation with an allele-specific oligonucleotide that is specific for
CC the nucleotide variation and detecting the absence or presence of allele-
CC specific hybridization; (4) a method for amplifying a nucleic acid
CC comprising a nucleotide variation at a nucleotide position given in the
specification; (5) a method for determining the genotype of a tumor
CC sample from a mammal; (6) a method for classifying a tumor in a mammal by
detecting the presence of a variation in a PRO or PRO polynucleotide in a
CC biological sample derived from the mammal; and (7) a method for
predicting whether a tumor will respond to a therapeutic agent that
targets a PRO or a PRO polynucleotide by determining whether the tumor
comprises a variation in a PRO or PRO polynucleotide, where the presence
CC of a variation indicates that the tumor will respond to the therapeutic
agent. The method of amplifying a nucleic acid comprising a nucleotide
CC variation comprises: (a) contacting the nucleic acid with a primer that
CC hybridizes to the nucleic acid at a sequence 3' of the nucleotide
variation, and (b) extending the primer to generate an amplification
CC product comprising the nucleotide variation. The variations disclosed in
the invention are useful in methods and compositions related to cancer
diagnosis and therapy. The present sequence is an isolated polynucleotide
CC of the invention.

CC
CC Revised record issued on 09-JUL-2008 : Enhanced with precomputed infor
CC

CC

CC Revised record issued on 09-JUL-2008 : mation from BOND.

XX

SQ Sequence 3724 BP; 1242 A; 684 C; 763 G; 1035 T; 0 U; 0 Other;

Query Match 97.5%; Score 3339.6; DB 7; Length 3724;
 Best Local Similarity 98.8%;
 Matches 3385; Conservative 0; Mismatches 39; Indels 2; Gaps 2;

| | | |
|----|--|-----|
| Qy | 1 AGGATCAGAACATGCCTCCAAGACCATCATCAGGTGAACGTGGGCATCCACTTGATG | 60 |
| | | |
| Db | 146 AGAATCAGAACATGCCTCCACGACCATCATCAGGTGAACGTGGGCATCCACTTGATG | 205 |
| Qy | 61 CCCCAAGAACATCCTAGTGGATGTTACTACCAAATGGAATGATAGTGACTTTAGAATGC | 120 |
| | | |
| Db | 206 CCCCAAGAACATCCTAGTAGAATGTTACTACCAAATGGAATGATAGTGACTTTAGAATGC | 265 |
| Qy | 121 CCTCGTGGGCTACATTAGTAACATAAAAGCATGAACATTAAAGAAGCAAGAAAATAC | 180 |
| | | |
| Db | 266 CCTCGTGGGCTACATTAAATAACCATAAAAGCATGAACATTAAAGAAGCAAGAAAATAC | 325 |
| Qy | 181 CCTCTCCATCAACTTCTCAAGATGAATCTTACATTTCTGAAGTGTACCCAGAA | 240 |
| | | |
| Db | 326 CCCCTCCATCAACTTCTCAAGATGAATCTTACATTTCTGAAGTGTACTCAAGAA | 385 |
| Qy | 241 GCAGAAAGGGAGAATTGGATGAAACAAGACGACTTGTGATCTCGGTTTTCAA | 300 |
| | | |
| Db | 386 GCAGAAAGGGAGAATTGGATGAAACAAGACGACTTGTGACCTCGGTTTTCAA | 445 |
| Qy | 301 CCATTTTAAAGTAATTGAACCACTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA | 360 |
| | | |
| Db | 446 CCCTTTTAAAGTAATTGAACCACTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA | 505 |
| Qy | 361 ATTGGTTTGCATCGGCATGCCAGTGTGCGAATTGATGGTAAAGATCCTGAAGTA | 420 |
| | | |
| Db | 506 ATTGGTTTGCATCGGCATGCCAGTGTGCAATTGATGGTAAAGATCCAGAAGTA | 565 |
| Qy | 421 CAGGACTTCCGAAGAAATTCTTAATGTTGTAAGAAGCTGTGGATCTTAGGGATCTT | 480 |
| | | |
| Db | 566 CAGGACTTCCGAAGAAATTCTGAACGTTGTAAGAAGCTGTGGATCTTAGGGACCTC | 625 |
| Qy | 481 AATTACACCTCATAGTAGAGCAATGTATGTCATCCGCCACATGAGAATCTCACCAAGAG | 540 |
| | | |
| Db | 626 AATTACACCTCATAGTAGAGCAATGTATGTCATCCCAAATGAGAATCTCACCAAGAA | 685 |
| Qy | 541 CTGCCAAAGCACATATATAATAAAATTGGATAGAGGCCAATAATAGTGGTGATTGGTA | 600 |
| | | |
| Db | 686 TTGCCAAAGCACATATATAATAAAATTAGATAAAGGCCAATAATAGTGGTATCTGGGTA | 745 |

| | | | |
|----|------|--|------|
| Qy | 601 | ATAGTTCTCAAATAATGACAAGCAGAAGTATACTCTGAAAATCAACCATGACTGTGTG | 660 |
| | | | |
| Db | 746 | ATAGTTCTCAAATAATGACAAGCAGAAGTATACTCTGAAAATCAACCATGACTGTGTG | 805 |
| Qy | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAACTAGAAGTATGTTGCTATCATCT | 720 |
| | | | |
| Db | 806 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAACTCGAAGTATGTTGCTATCCCTC | 865 |
| Qy | 721 | GAACAAATTAAAACCTCTGTGTTTAGAATATCAGGGCAAGTACATTTAAAAGTGTGGA | 780 |
| | | | |
| Db | 866 | GAACAACTAAAACCTCTGTGTTTAGAATATCAGGGCAAGTATATTTAAAAGTGTGGA | 925 |
| Qy | 781 | TGTGATGAATACTTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATAAGAAGCTGT | 840 |
| | | | |
| Db | 926 | TGTGATGAATACTTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATAAGAAGCTGT | 985 |
| Qy | 841 | ATAATGCTGGGAGGATGCCAATTGAAAGATGATGGCTAAAGAAAGCCTTATTCTCAA | 900 |
| | | | |
| Db | 986 | ATAATGCTGGGAGGATGCCAATTGATGTTGATGGCTAAAGAAAGCCTTATTCTCAA | 1045 |
| Qy | 901 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 960 |
| | | | |
| Db | 1046 | CTGCCAATGGACTGTTTACAATGCCATCTTATTCCAGACGCATTCCACAGCTACACCA | 1105 |
| Qy | 961 | TATATGAATGGAGAACATCTACAAAATCCCTTGGGTATAATAGAGCACTCAGAATA | 1020 |
| | | | |
| Db | 1106 | TATATGAATGGAGAACATCTACAAAATCCCTTGGGTATAATAGTGCACTCAGAATA | 1165 |
| Qy | 1021 | AAAATTCTTGCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTATGTT | 1080 |
| | | | |
| Db | 1166 | AAAATTCTTGCAACCTACGTGAATGTAATATTGAGACATTGATAAGACTATGTT | 1225 |
| Qy | 1081 | CGAACAGGTATCTACCAGGAGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1140 |
| | | | |
| Db | 1226 | CGAACAGGTATCTACCAGGAGAGAACCTTATGTGACAATGTGAACACTCAAAGAGTA | 1285 |
| Qy | 1141 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATACATTCTGATCTT | 1200 |
| | | | |
| Db | 1286 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATACATTCTGATCTT | 1345 |
| Qy | 1201 | CCTCGTGTGCTCGACTTGCCTTCCATTGCTCTGTTAAAGGCCGAAAGGGTGTAAA | 1260 |
| | | | |
| Db | 1346 | CCTCGTGTGCTCGACTTGCCTTCCATTGCTCTGTTAAAGGCCGAAAGGGTGTAAA | 1405 |
| Qy | 1261 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTA | 1320 |
| | | | |
| Db | 1406 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGATTACACAGACACTCTA | 1465 |
| Qy | 1321 | GTATCTGAAAAATGGCTTGAATCTTGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |

| | | | |
|----|------|--|------|
| Db | 1466 | GTATCTGGAAAATGGCTTGAATCTTGCCAGTACCTCATGGATTAGAAGATTGCTG | 1525 |
| Qy | 1381 | AACCCTATTGGTGTACTGGATCAAATCCAATAAAGAAACTCCATGCTTAGAGTTGGAG | 1440 |
| Db | 1526 | AACCCTATTGGTGTACTGGATCAAATCCAATAAAGAAACTCCATGCTTAGAGTTGGAG | 1585 |
| Qy | 1441 | TTTGACTGGTCAGCAGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1500 |
| Db | 1586 | TTTGACTGGTCAGCAGTGGTAAAGTCCCAGATATGTCAGTGATTGAAGAGCATGCC | 1645 |
| Qy | 1501 | AATTGGTCTGTATCCCGAGAACGCAGGATTAGCTATTCCCACGCAGGACTGAGTAACAGA | 1560 |
| Db | 1646 | AATTGGTCTGTATCCCGAGAACGCAGGATTAGCTATTCCCACGCAGGACTGAGTAACAGA | 1705 |
| Qy | 1561 | CTAGCTAGAGACAATGAATTAAGGGAAAATGACAAAGAACAGCTCAAAGCAATTCTACA | 1620 |
| Db | 1706 | CTAGCTAGAGACAATGAATTAAGGGAAAATGACAAAGAACAGCTCAAAGCAATTCTACA | 1765 |
| Qy | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAAGATTTCTATGGAGTCACAGACAC | 1680 |
| Db | 1766 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAAGATTTCTATGGAGTCACAGACAC | 1825 |
| Qy | 1681 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGTCGTAAATGGAATTCT | 1740 |
| Db | 1826 | TATTGTGTAACTATCCCCGAAATTCTACCCAAATTGCTCTGTCGTAAATGGAATTCT | 1885 |
| Qy | 1741 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAAGATTGGCCTCCAATCAAACCTGAA | 1800 |
| Db | 1886 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAAGATTGGCCTCCAATCAAACCTGAA | 1945 |
| Qy | 1801 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCCTATGGTCGAGGTTTGCTGTT | 1860 |
| Db | 1946 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCCTATGGTCGAGGTTTGCTGTT | 2005 |
| Qy | 1861 | CGGTGCTTGGAAAAATATTAACAGATGACAAACTTCTCAGTATTAAATTAGCTAGTA | 1920 |
| Db | 2006 | CGGTGCTTGGAAAAATATTAACAGATGACAAACTTCTCAGTATTAAATTAGCTAGTA | 2065 |
| Qy | 1921 | CAGGTCTAAATATGAACATATTGGATAACTTGCTGTGAGATTAACTGAAGAAA | 1980 |
| Db | 2066 | CAGGTCTAAATATGAACATATTGGATAACTTGCTGTGAGATTAACTGAAGAAA | 2125 |
| Qy | 1981 | GCATTGACTAATCAAAGGATGGGACTTTCTTTGGCATTAAAATCTGAGATGCAC | 2040 |
| Db | 2126 | GCATTGACTAATCAAAGGATGGGACTTTCTTTGGCATTAAAATCTGAGATGCAC | 2185 |
| Qy | 2041 | AATAAAACAGTTAGCCAGAGGTTGGCCTGCTTGGAGTCCTATTGCGTGCATGGG | 2100 |

| | | | |
|----|------|---|------|
| Db | 2186 | AATAAAACAGTTAGCCAGAGGTTGGCTGCTTGGAGTCCTATTGCGTGATGTGGG | 2245 |
| Qy | 2101 | ATGTATTGAAAGCACCTGAATAGGCAAGTCAGGCAATGGAAAAGCTCATTAACCTA | 2160 |
| Db | 2246 | ATGTATTGAAAGCACCTGAATAGGCAAGTCAGGCAATGGAAAAGCTCATTAACCTA | 2305 |
| Qy | 2161 | GACATTCTCAAACAGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTT | 2220 |
| Db | 2306 | GACATTCTCAAACAGGAGAAGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTT | 2365 |
| Qy | 2221 | GAGCAAATGAGGCGACCAGATTCTATGGATGCCCTACAGGGCTGCTGTCCTCTAAAC | 2280 |
| Db | 2366 | GAGCAAATGAGGCGACCAGATTCTATGGATGCTACAGGGCTTCTGTCCTCTAAAC | 2425 |
| Qy | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTTAAAGAGTGTGAAATTATGCTCTGCAAAA | 2340 |
| Db | 2426 | CCTGCTCATCAACTAGGAAACCTCAGGCTTGAAGAGTGTGAAATTATGCTCTGCAAAA | 2485 |
| Qy | 2341 | AGGCCACTGTGGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTCAGAAC | 2400 |
| Db | 2486 | AGGCCACTGTGGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTCAGAAC | 2545 |
| Qy | 2401 | AATGAGATCATTTAAAAATGGGGATGATTACGGCAAGATATGCTAACACTCAAATT | 2460 |
| Db | 2546 | AATGAGATCATTTAAAAATGGGGATGATTACGGCAAGATATGCTAACACTCAAATT | 2605 |
| Qy | 2461 | ATTCGTATTATGAAAATATCTGGAAATCAAGGTCTGATCTCGAATGTTACCTTAT | 2520 |
| Db | 2606 | ATTCGTATTATGAAAATATCTGGAAATCAAGGTCTGATCTCGAATGTTACCTTAT | 2665 |
| Qy | 2521 | GGTTGTCGTCAATCGTGACTGTGTTGGACTTATTGAGGTGGTGCAGAAATTCTCACACT | 2580 |
| Db | 2666 | GGTTGTCGTCAATCGTGACTGTGTTGGACTTATTGAGGTGGTGCAGAAATTCTCACACT | 2725 |
| Qy | 2581 | ATTATGCAAATTCACTGCAAAGGCGGTTGAAAGGTGCACTGCAGTTAACAGCCACACA | 2640 |
| Db | 2726 | ATTATGCAAATTCACTGCAAAGGCGGTTGAAAGGTGCACTGCAGTTAACAGCCACACA | 2785 |
| Qy | 2641 | CTACATCACTGGCTCAAAGACAAGAACAAAGGAGAAATATGATGCAGCCATTGACCTG | 2700 |
| Db | 2786 | CTACATCACTGGCTCAAAGACAAGAACAAAGGAGAAATATGATGCAGCCATTGACCTG | 2845 |
| Qy | 2701 | TTTACACGTTCATGTGCTGGATACTGTGAGCTACCTTCATTTGGAAATTGGAGATCGT | 2760 |
| Db | 2846 | TTTACACGTTCATGTGCTGGATACTGTGAGCTACCTTCATTTGGAAATTGGAGATCGT | 2905 |
| Qy | 2761 | CACAATAGTAACATCATGGTAAAGACGATGGACAATGTTCATATAGATTGGACAC | 2820 |
| Db | 2906 | CACAATAGTAACATCATGGTAAAGACGATGGACAATGTTCATATAGATTGGACAC | 2965 |

| | | | |
|----|------|--|------|
| Qy | 2821 | TTTTGGATACAAGAAGAAAAATTGGTATAAACGAGAACGTGTGCCATTGTTTG | 2880 |
| | | | |
| Db | 2966 | TTTTGGATACAAGAAGAAAAATTGGTATAAACGAGAACGTGTGCCATTGTTTG | 3025 |
| | | | |
| Qy | 2881 | ACACAGGATTCTTAATAGTGATTAAAGGAGGCCAAGAACATGCACAAAGACAAGAGAA | 2940 |
| | | | |
| Db | 3026 | ACACAGGATTCTTAATAGTGATTAAAGGAGGCCAAGAACATGCACAAAGACAAGAGAA | 3085 |
| | | | |
| Qy | 2941 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACAGCATGCCAAT | 3000 |
| | | | |
| Db | 3086 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACAGCATGCCAAT | 3145 |
| | | | |
| Qy | 3001 | CTCTTCATAAAATCTTCTCAATGATGCTTGGCTCTGGAATGCCAGAACTACAATCTTT | 3060 |
| | | | |
| Db | 3146 | CTCTTCATAAAATCTTCTCAATGATGCTTGGCTCTGGAATGCCAGAACTACAATCTTT | 3205 |
| | | | |
| Qy | 3061 | GATGACATTGCATACATTGAAAGACCCTAGCCTTAGATAAAACTGAGCAAGAGGCTTG | 3120 |
| | | | |
| Db | 3206 | GATGACATTGCATACATTGAAAGACCCTAGCCTTAGATAAAACTGAGCAAGAGGCTTG | 3265 |
| | | | |
| Qy | 3121 | GAGTATTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT | 3180 |
| | | | |
| Db | 3266 | GAGTATTCATGAAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGAT | 3325 |
| | | | |
| Qy | 3181 | TGGATCTCCACACAATTAAACAGCATGCATTGAACTG-AAAGATAACTGAGAAAATGAA | 3239 |
| | | | |
| Db | 3326 | TGGATCTCCACACAATTAAACAGCATGCATTGAACTGAAAAGATAACTGAGAAAATGAA | 3385 |
| | | | |
| Qy | 3240 | AGCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGCAAAGACCGATTGC | 3299 |
| | | | |
| Db | 3386 | AGCTCACTCTGGATTCCACACTGCACTGTTAATAACTCTCAGCAGGCAAAGACCGATTGC | 3445 |
| | | | |
| Qy | 3300 | ATAGGAATTGCACAATCCATGAACAGCATTAG-ATTTACAGCAAGAACAGAAATAAAATA | 3358 |
| | | | |
| Db | 3446 | ATAGGAATTGCACAATCCATGAACAGCATTAGAATTACAGCAAGAACAGAAATAAAATA | 3505 |
| | | | |
| Qy | 3359 | CTATATAATTAAATAATGAAACGCAAACAGGGTTGATAGCACTTAAACTAGTTCAATT | 3418 |
| | | | |
| Db | 3506 | CTATATAATTAAATAATGAAACGCAAACAGGGTTGATAGCACTTAAACTAGTTCAATT | 3565 |
| | | | |
| Qy | 3419 | TCAAAA 3424 | |
| | | | |
| Db | 3566 | TCAAAA 3571 | |

Search completed: January 18, 2011, 09:21:06
Job time : 499.443 secs

SCORE 2.0